OFFICIAL PUBLICATION OF THE MEDICAL SOCIETY OF VIRGINIA

VIRGINIA MEDICAL MONTHLY

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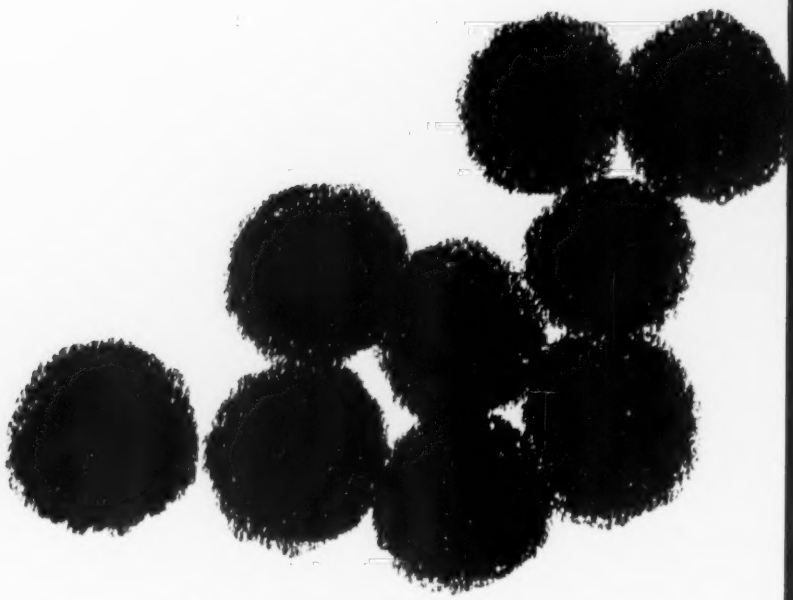

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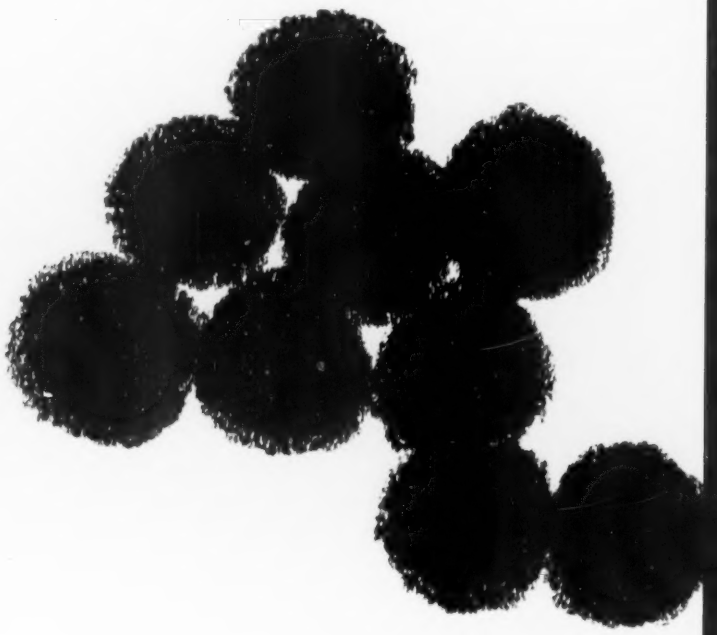

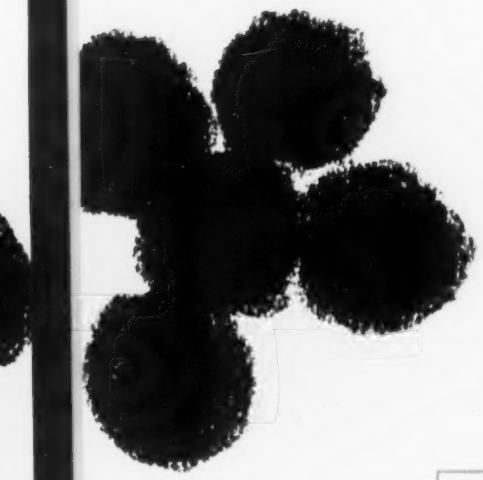

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*Pratt, R., & Dufrenoy, J.: Texas Rep. Biol. & Med. *12*:145, 1954.

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Published monthly by The Medical Society of Virginia

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Managing Editor—L. SPENCER WATKINS
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Annual Subscription—$2.00 Single Copies—25¢

Entered as Second Class Matter at the Postoffice, Richmond, Virginia, under the Act of March 3, 1879.

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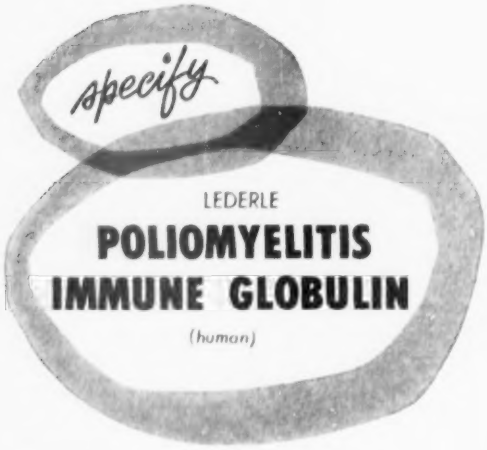

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Brown, H. W.: J. Pediat. 45:419, 1954.

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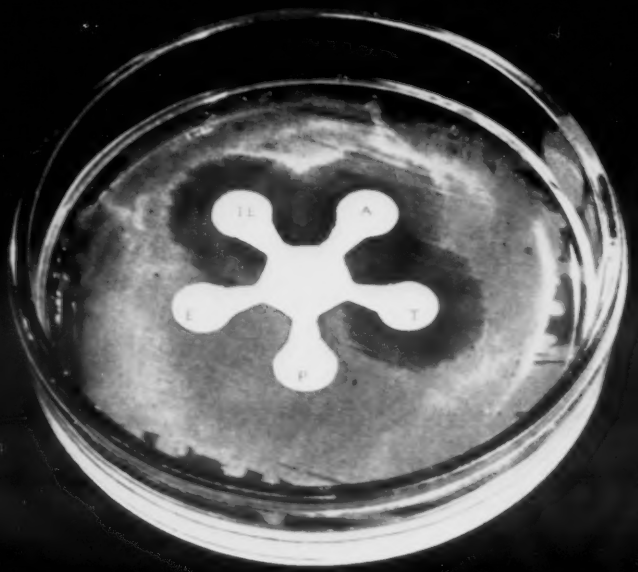

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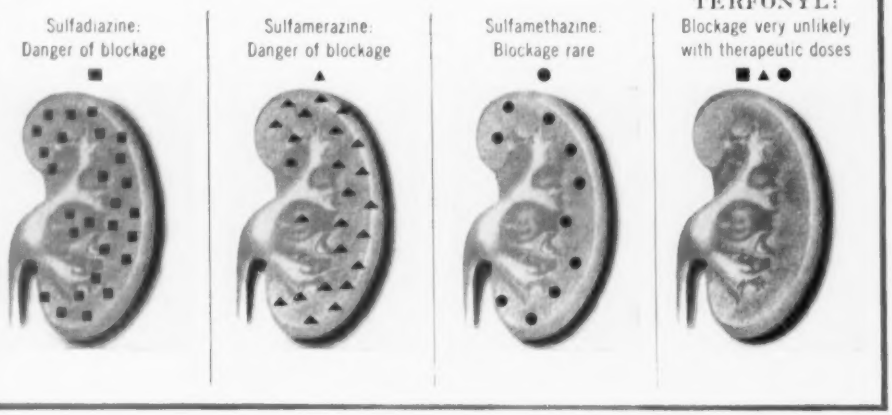

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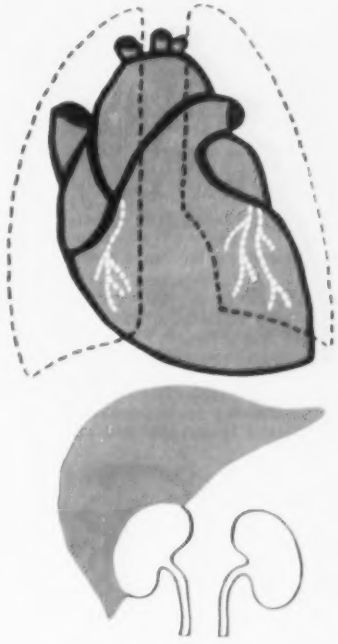

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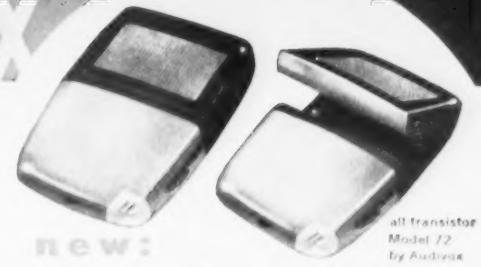

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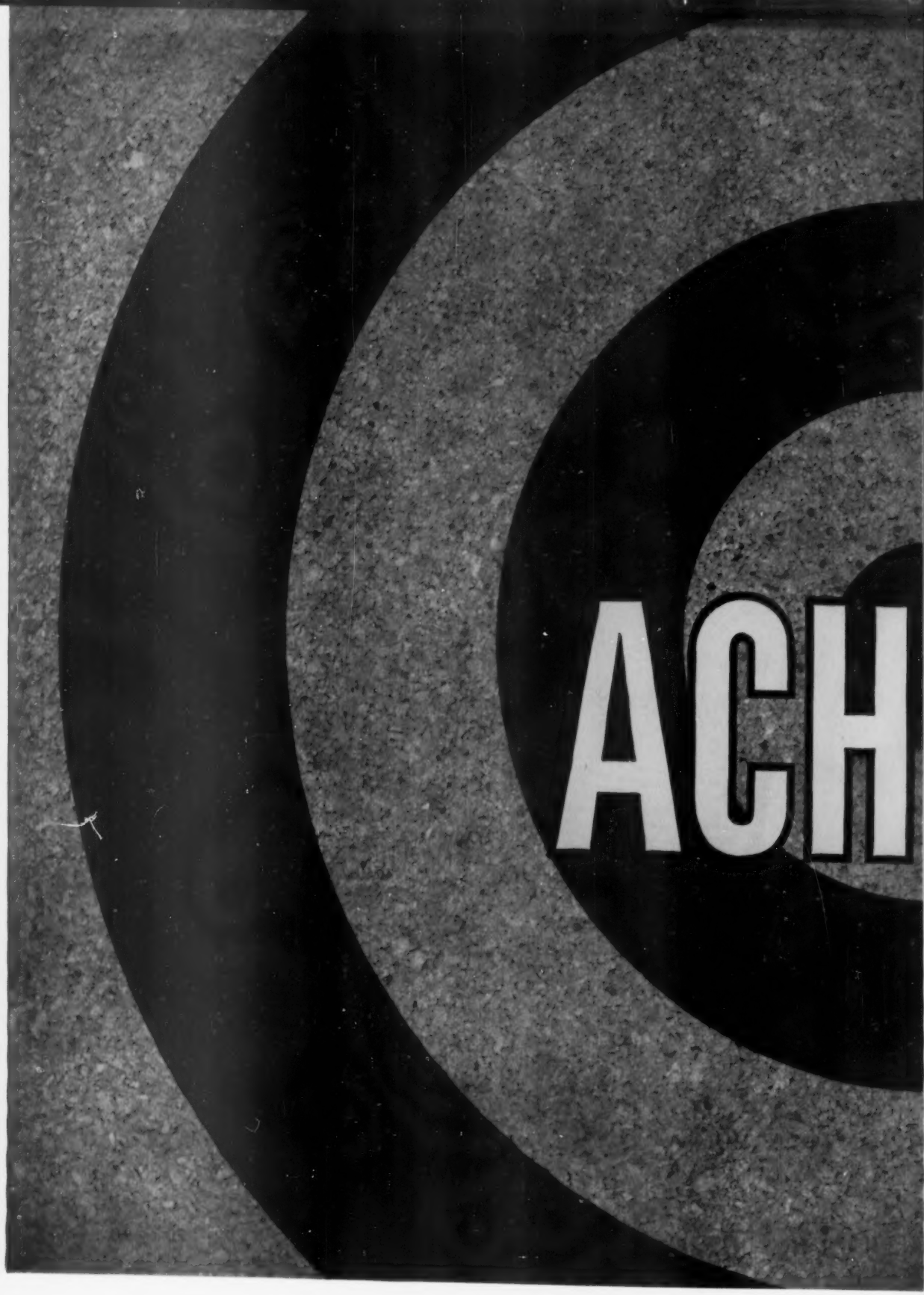
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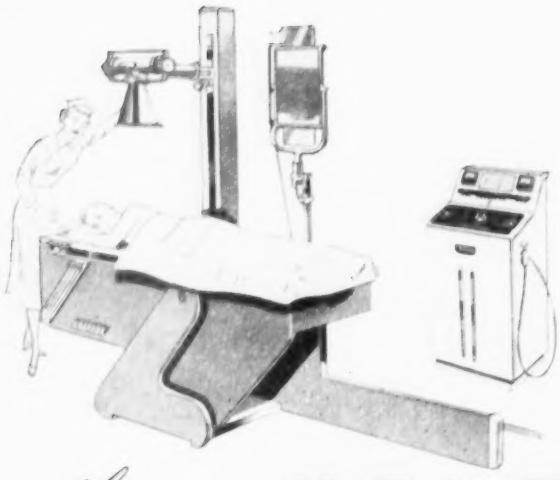

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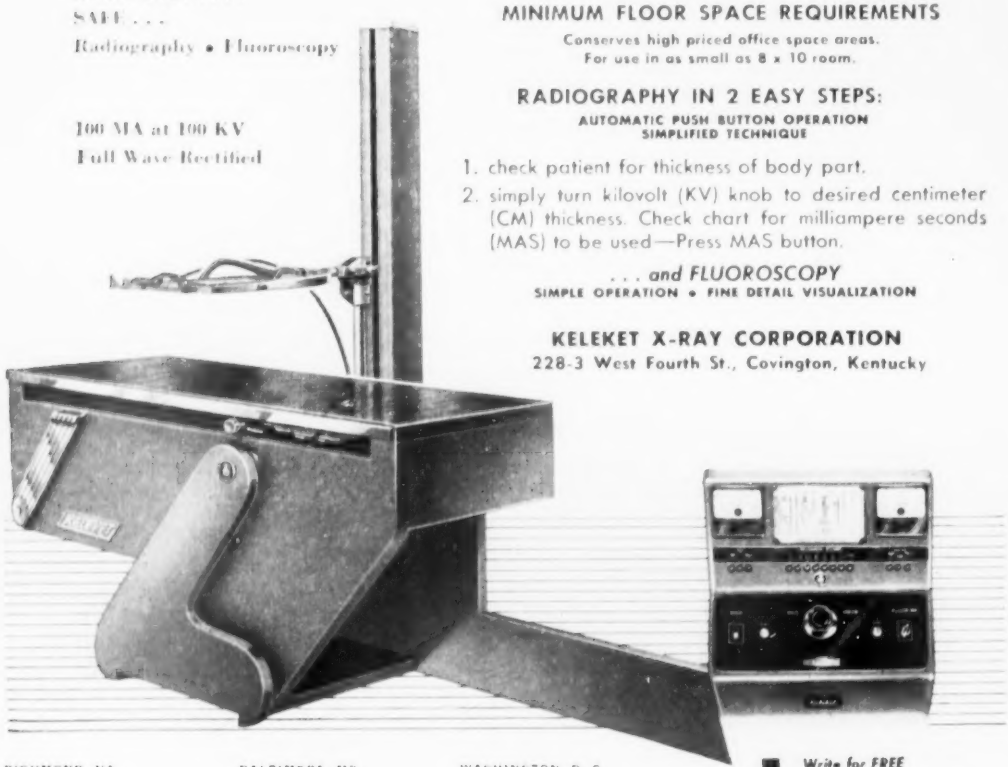

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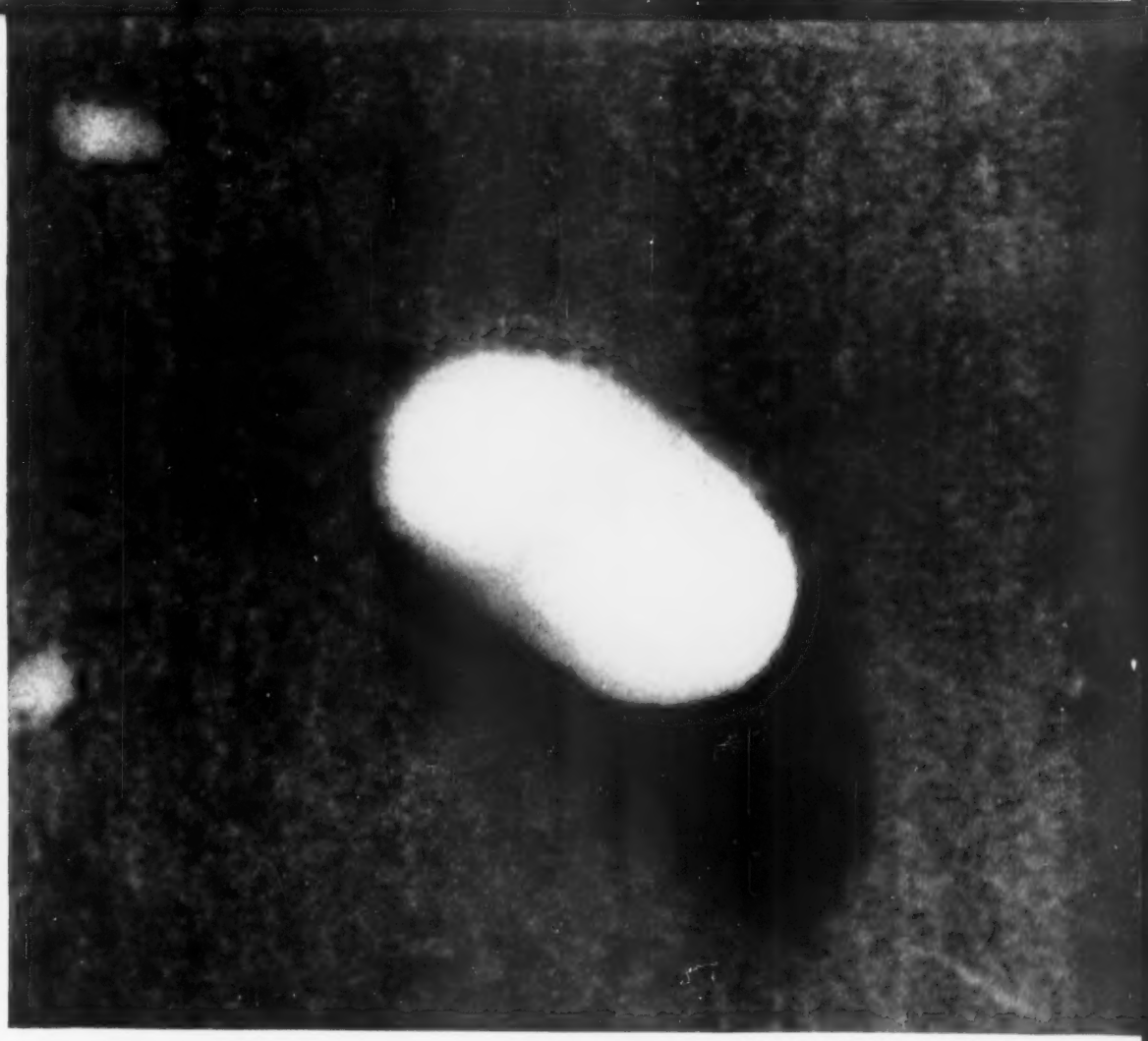

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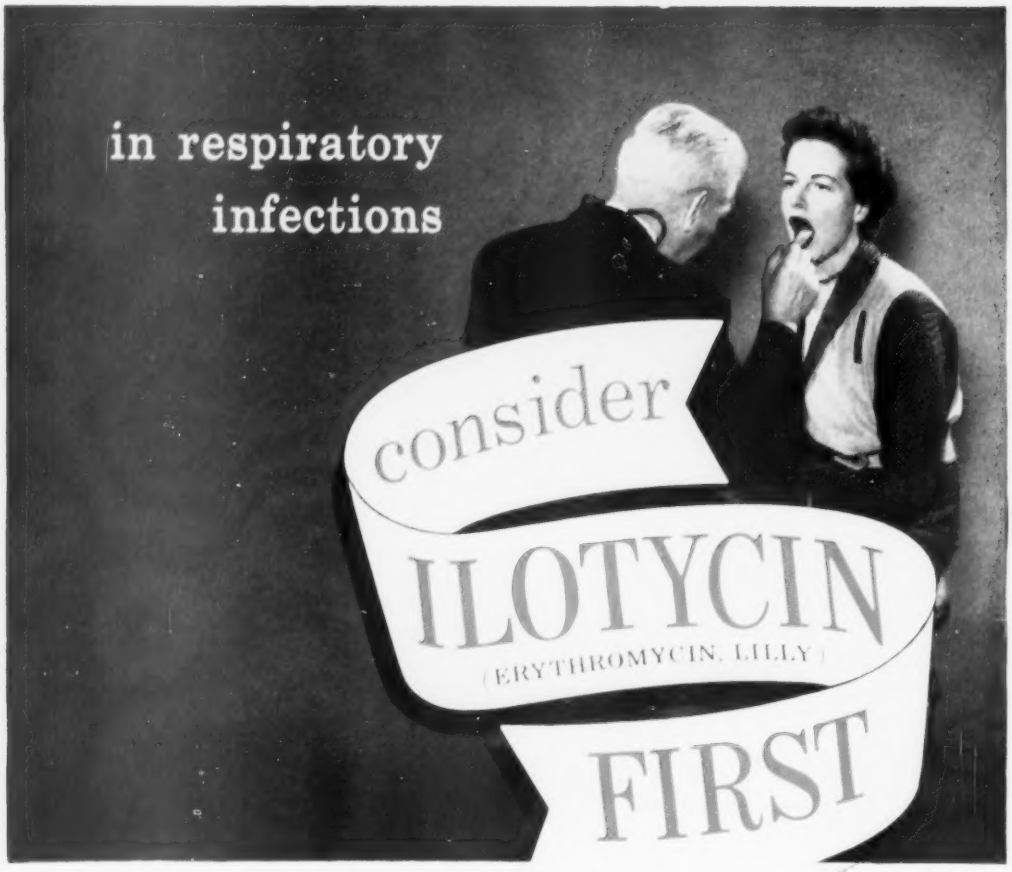

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MONTHLY

March, 1955

Vol. 82, No. 3

Whole No. 1233

Treatment of Some Common Hematologic Disorders Seen in Practice

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THE purpose of this paper is to present to the physician in general practice some of the methods of treatment available of the more commonly encountered blood and related diseases. It is not a complete review of either all means of therapy or of all the diseases. However, it is hoped that it will be of practical value in the management of some of the problems encountered.

Leukemia and Malignant Lymphoma[1,2]

The publicity which has attended the effects of atomic bomb explosions has brought the toxic effects of irradiation to the fore.[10] Data obtained from the Japanese cities of Hiroshima and Nagasaki revealed an increased incidence to leukemia in the population exposed as compared with the non-exposed population of two other cities.[7] Likewise, an increased incidence of the disease has been noted in radiologists and other physicians using fluoroscopy routinely.[19] The general population, too, has shown an increased incidence. With this increase in incidence, it is only natural that there should follow apace many forms of therapy that are available.

Because some agents which are used for leukemia are likewise used for malignant lymphoma, these disease groups will be discussed together. Therapeutic measures other than palliative are mainly three: (1) chemotherapeutic agents, (2) irradiation, and (3) surgery.

In using chemotherapeutic agents, one is constantly striving to replace a toxic agent with one less toxic—but still effective.[1] As an author[24] humorously put it—the problem of finding an effective agent for treatment of leukemia and lymphoma is almost—not quite, but almost—as hard as finding some agent that will dissolve away the left ear, say, yet leave the right ear unharmed; so slight is the difference between the cancer cell and its normal ancestor.[1]

Nitrogen Mustard.—The chemical names for two such agents are: Methyl-bis (betachloroethyl) amine hydrochloride is the preparation most frequently used, and a newer one called L-y—bis (bis (beta-chlorethyl) aminopropane dihydrochloride. The latter does not give as severe gastrointestinal symptoms but may produce depression and lethargy for 24 hours.

Nitrogen mustard therapy is of chief value in those lymphomas of a generalized character. It is likewise useful where a resistance to irradiation treatment has developed, or those in whom fibrosis of the lungs is present.

While this agent has not effected a cure, it nevertheless may bring about marked symptomatic improvement and in some cases prolong life. Upon going into solution and being injected intravenously, it combines with certain enzyme systems and produces cellular death. The clinical response is evident within a day or two days—with a lessening of fever and anorexia. The toxic effect on the blood and bone marrow is shown by a reduction in leukocytes and platelets within 10 to 14 days. Seldom is the deleterious effect alarming, although a blood transfusion may be needed.

Nitrogen mustard is administered intravenously, a total course consisting of 0.4 mg. per kg. of body weight. This can be given as 0.1 mg./kg. of the

*Presented at the Annual Meeting of the Virginia Academy of General Practice, May 7, 1954, Richmond, Va.

agent on four successive days, or some prefer to give the total dosage in one or two days. It is administered rapidly into the tubing of a freely running intravenous infusion. The agent should be prepared just prior to administration as the drug decomposes on standing. Nausea and vomiting are side effects that may be lessened with sedation and drugs commonly used for motion sickness. Remission of symptoms may last several weeks or several months. Three weeks should elapse before repeating this treatment. It would seem more logical not to repeat the treatment until the symptoms warranted it.

Triethylene Melamine (TEM)[1]—This compound resembles nitrogen mustard chemically and was originally used in Germany to improve the finish of rayon fabrics. Its action on neoplastic tissue is like that of nitrogen mustard, but it has the advantage of being administered orally.

Recovery from the marrow depression with TEM is slower and more difficult to evaluate. Relief of the patient's symptoms begins on an average of seven to nine days with TEM as compared to two or three days with nitrogen mustard.

Rundles and his associates[20,21] have viewed TEM as a significant advance in therapy notwithstanding its toxicity. They point out that its use in chronic proliferative diseases arising from the lymphatic tissue which are widespread is most promising, and compares with total body irradiation. Although TEM profoundly suppresses bone marrow constituents, its use in myelocytic leukemia, multiple myeloma, and polycythemia vera are disappointing. In chronic lymphatic leukemia, TEM is very effective and, because of the extreme sensitivity of the lymphocytes to its action, only small doses are necessary.

TEM is dispensed as a 5 mg. scored tablet. Dosage varies and should be controlled carefully. It is best given on an empty stomach with water and an alkali such as sodium bicarbonate, to minimize decomposition before absorption has taken place. An initial dose of 2.5 to 5 mg. is given to observe the patient's clinical and hematologic reactions. This may be repeated in two or three days, or more often if indicated. Usually after a total of 10 to 15 mg. of TEM, a waiting period of two weeks is observed before any further dose is given. When the maximum benefit has been observed, maintenance therapy (1.0 to 5.0 mg. per week) may be instituted. Repeated peripheral blood examinations, leukocyte counts, and even bone marrow examination, should be performed at frequent intervals to maintain proper dosage control.

Urethane (ethyl-carbonate) has since 1946 been used with encouraging results in the treatment of chronic myeloid leukemia and in multiple myeloma.[21] Other varieties of myelogenous leukemia and polycythemia vera may also be controlled satisfactorily by Urethane. Its mode of action is probably due to the inhibition of the rate of neoplastic mitotic cell division.

Urethane is usually given in oral doses in enteric coated five grain tablets. A convenient plan of treatment is to give one gram daily in divided doses and increase gradually until three to five grams (9 to 15 tablets) a day are taken. Anorexia, nausea, vomiting, diarrhea, or even hepatitis may limit the dose. Usually within two weeks its effect is reflected in a marked lowering of the total white count and an improvement in the clinical symptoms. When this occurs, a maintenance dose of one to two grams is prescribed, and further dosage variance is guided by a rising or falling trend of the total leukocyte count. For safety, this count should not be allowed to go below 10,000 per cubic centimeter in the leukemias.

Fowler's Solution (Solution of Potassium Arsenite, U. S. P.)—This drug is probably one of the oldest used for the treatment of chronic leukemia, dating from 1865. After the introduction of roentgen therapy it was all but forgotten until Forkner and Scott[7] revived its use in 1931. Even so, the advent of new preparation causes this drug to be often forgotten in spite of its proven usefulness. Its mode of action is not clear, but the effect is like the remissions produced by x-ray. Most important, it is economical and available everywhere. It is sometimes effective when refractoriness to irradiation has occurred. Toxic symptoms as nausea, diarrhea, herpes, drying and scaling of the skin can be watched for by the patient and the drug stopped for several days with abatement of these symptoms. Resumption of the medication in smaller doses is usually well tolerated. Long term maintenance therapy at small expense with relatively little danger makes Fowler's solution an important agent in caring for patients with chronic myeloid leukemia.

The method used for administration of Fowler's solution is 3 to 4 minims in fruit juice or water three times daily following meals. This is increased by 1 minim three times daily every third or fourth day until a total of 30 to 40 minims total daily are given. When the maximum clinical improvement is noted and the leukocyte count approaches normal, the total dosage is decreased by 1 minim daily until an aver-

age of 15 to 24 minims daily are being taken. This is the maintenance dose and may be continued indefinitely unless clinical signs of toxicity warrant its discontinuance for several days.

Acute Leukemia

A diagnosis of acute leukemia presents a more difficult problem in management for the physician. There are many agents that have been advocated and many more that are being investigated.

Folic Acid Antagonists. Aminopterin (4-aminopteroylglutamic acid) and several other similar chemical compounds have been developed that interfere with normal cellular metabolism of the hematopoietic system. Folic acid and its converted folinic acid ("citrovorum factor") is probably essential for purine metabolism. Aminopterin is physiologically antagonistic to folic acid or the citrovorum factor or both, and thereby blocks cellular metabolism. It is this toxic action that gives the beneficial effect in acute leukemia.

Aminopterin is particularly useful in the acute leukemia of childhood, youth, and perhaps early adulthood. In adults over thirty years of age its toxic effects are so marked and its beneficial effects so uncommon, its use is questionable. In children and young adults, complete remissions both clinically and hematologically are obtained in approximately half of the cases.

Administration of aminopterin may be oral or intramuscular at 0.5 mg. to 2.5 mg. daily until a remission is achieved. After this, maintenance dosage must be individualized, but averages 0.5 to 1 mg. daily. Toxic effects are bone marrow depression with resultant thrombopenia and leucopenia, hemorrhagic phenomena, alopecia, oral or gastrointestinal tract ulcerations, and anorexia. The citrovorum factor (folinic acid) is reputed to be of benefit in relieving these toxic symptoms, yet not interfere with the antileukemic effect of the folic acid antagonist.

Remissions with aminopterin or other folic acid antagonists may be enhanced with concurrent or alternate use of the hormones ACTH or cortisone.[4]

Acth and Cortisone. These hormones judiciously used may effect striking remissions in acute leukemia. What their mode of action is remains unknown, but it does not appear to be due to tissue toxicity. Their action in chronic leukemia, lymphosarcoma, and multiple myeloma is not promising.

Because ACTH has to be given by injection (intramuscularly), we prefer the oral cortisone tablets because of ease of administration. In acute leukemia, we give 300 mg. in divided doses initially for the first twenty-four hours, gradually reducing the dose until a remission is obtained. After this, 50 to 75 mg. a day as a maintenance dose is given. Therapy should be continued for 10 to 14 days before declared a failure. Care must be taken to watch for cortisone side effects.

Mercaptoethyl ("Purinethol")[6]. This new drug has been developed at the Wellcome Research Laboratories[6] and shown by Burchenal and associates[7] to provide temporary remission, either partial or complete, of acute leukemia and of chronic myelogenous leukemia. It is apparently of no value in chronic lymphatic leukemia, nor is it of value in the treatment of solid tumors.

The theory for its action lies in its ability to interfere with nucleic acid metabolism. The hematologic effect is giving rise to a leucopenia, and, with excessive dosage, thrombocytopenia and bleeding. Toxic reactions are few except for mild gastrointestinal symptoms as nausea, vomiting, and diarrhea. The formed elements in the peripheral blood may fall for several days after stopping Purinethol®. It is important, therefore, to stop the drug as soon as the first evidence of a fall in the white cell count is noticed. If subsequent leukocyte counts remain constant for several days, or rise, treatment should be resumed. Maintenance dosage should be individualized to prevent an early relapse.

Purinethol® is dispensed as 50 mg.-scored tablets. Dosage averages 100 to 300 mg. in the adult and 50 mg. in an average 5 year old child as the daily dose. It may be continued until a fall in the leukocyte count occurs and the precautions noted above observed. This may take place in 1 to 2 weeks. If there is no change within 4 weeks, careful increase of the dosage may be made.

Irradiation

X-ray remains the basic form of treatment for chronic leukemia and lymphoma. It is effective and available generally, but requires careful management by a trained roentgenologist, although supportive care by the clinician is essential. By cooperative efforts of these physicians, many patients may live useful lives for years in spite of their disease.

Localized treatment over local tumor masses, mediastinal nodes, or enlarged spleens relieves pressure symptoms and influences the blood picture. The resultant nausea and vomiting is rarely of major concern, and can be treated symptomatically.

Osgood and Seaman[17] have used with much success titrated, regularly spaced total body roentgen irradiation. The criterion for "titration" is the response

to previous therapy. This determined dose at the determined interval must be repeated while the condition of the patient is ideal. Using the regularly spaced, small doses of spray irradiation, patients with chronic leukemias are able to spend over 80% of their leukemic life-span at their normal occupations.

Radioactive phosphorus has been used in the treatment of chronic myeloid leukemia, but is more hazardous than x-ray. This drug is primarily useful in polycythemia vera. It could not be used in general practice nor administered by any but trained personnel, as its use is under strict control of the Atomic Energy Commission.

TABLE I

DRUGS REPORTED TO HAVE PRODUCED GRANULOCYTOPENIA

Aminopyrine	Presidon ®
Butazolidin ®	Pyribenzamine ®
Chloramphenicol	Quinine
Dinitrophenol	Sulfonamides
Dilantin Sodium ®	Tapazol ®
Gantrisin ®	Thiouracil
Gold preparations	Thiourea
Mesantoin ®	Tridione

AGRANULOCYTOSIS

Heck[7] and Osgood[18] have emphasized the toxicity of various drugs that may cause marrow depression with resultant granulocytopenia, thrombocytopenia or anemia. The drugs so implicated are numerous and are being added to as newer drugs are introduced to the profession. Aminopyrine, in sensitive individuals, sulfonamides, and other drugs shown in Table I, have been reported to cause agranulocytosis or other evidence of marrow hypoplasia.

Now that members of the aminopyrine group or drugs containing aminopyrine itself are again being recommended for treatment of rheumatoid arthritis, we need constantly to remind ourselves of the possible dangers of these drugs. A recent report by Hinz and Associates[11] is one of many showing toxicity to phenylbutazone.

Many methods or agents have been recommended for treatment. Among these are transfusions, typhoid vaccine, yellow bone marrow, Pentnucleotide®, liver extract, and ACTH and cortisone. All of these have been used in an effort to stimulate a depressed bone marrow. Their efficacy has not been remarkable. Today, treatment with antibiotics is believed to offer protection to certain individuals who otherwise might succumb to an infection. Careful supervision of the patient, particularly in using new or drugs reported to be dangerous, is of utmost importance.

INFECTIOUS MONONUCLEOSIS

This common disease affects chiefly children and young adults, although no age is excluded. Because of its morbidity and long convalescence, treatment other than symptomatic therapy would be welcome. Schultz and Hall,[22] in their recent study, demonstrated that penicillin or aureomycin gave clinical improvement in about half of their cases. This consisted in a lessening of fever, toxicity, and sore throat within 48 hours.

Others[5] have shown that ACTH given by eight hour intravenous drip caused fever to decrease, cervical glands and enlarged liver and spleen to recede, and clinical improvement start, whereas aureomycin therapy before had failed. This therapy is not recommended routinely, and should be reserved for the more acutely ill patients.

ANEMIAS[13,21,25]

Anemia is the most frequently encountered blood problem in practice. By definition, anemia is meant to be a reduction in the hemoglobin or number of erythrocytes or both below the accepted normal values. If 15.6 grams of hemoglobin is considered 100 per cent, 13.3 grams (85 per cent) and 12 grams (77 per cent) would be the low normal values for men and women, respectively. Total erythrocyte counts normally vary between 4.7 to 4.15 million. During the last trimester of pregnancy 10 grams of hemoglobin (64%) is the low normal for physiological anemia of pregnancy. This is due to a maximum dilution of the blood because of the increased blood volume.

ANEMIA OF CHRONIC INFECTION.—Sturgis, reporting on 25,000 admissions seen at the University of Michigan, found this mild anemia to be most common. One of every eight patients had hemoglobin values of approximately 9.5 grams (60 per cent) and the smear was normocytic, normochromic, i.e., normal in appearance.

Chronic nephritis with or without azotemia, chronic pulmonary infections, rheumatic infections, but especially genito-urinary infections have been the chief sources for this anemia. Treatment with antibiotics or other methods to eradicate the infection must be accomplished before the blood responds favorably, it then. Transfusions, if needed, may be the only treatment. Apparently there is a disturbance with hemoglobin metabolism, either through increased destruction or a depression of the bone marrow. The latter, is more probable.

IRON-DEFICIENCY ANEMIAS.—These anemias are next most common and are typically microcytic and hypochromic in type. Most often the iron deficit

indicates chronic hemorrhage. This is an important finding especially in adult males or females past the menopause, and its cause should be carefully investigated. In infants and early childhood, during pregnancy and lactation, it is most often due to a nutritional basis. Menstrual blood loss like blood loss from hemorrhoids, or a peptic ulcer is too often minimized as a cause for this anemia.

Treatment consists in supplying an iron preparation in adequate doses orally. Ferrous compounds as 0.3 grams (5 grains) given three times daily will usually show a favorable response within two weeks. In pre-menopausal females it is advisable to have them take an iron preparation two weeks in each month to supplement that iron lost in the menstrual discharges. This precautionary measure may help prevent a recurrence of the anemia.

Other factors should be considered. An adequate diet in proteins, vitamins, if needed, and especially vitamin C help these patients response to iron. Moore and his associates[10] showed that vitamin C reduces ferric compounds to the ferrous state and so facilitates iron absorption. It has been found that 50 to 100 mg. of ascorbic acid given three times daily is adequate for this purpose.

Occasionally, it may be found necessary to administer iron parenterally. This should not be regarded as routine treatment. It should be reserved for those special cases where oral iron cannot be tolerated or where, because of intestinal surgery or infection, absorption is not effective. Jectofer[®], a saccharated iron oxide, is effective when used with proper precautions. There are usually few side effects and the chief danger would lie in overzealous use of this therapy. Since it is completely absorbed into the circulation, that not utilized is stored in the reticuloendothelial system. Continued use of intravenous iron would, like repeated whole blood transfusions, lead to possible hemosiderosis. In giving intravenous iron the calculated dose must be adhered to for this reason. For comparison, 5 cc. of the saccharated iron oxide is equivalent to 100 mg. of elemental iron, whereas a 500 cc. whole blood transfusion is equivalent to approximately 250 mg. iron.

Anemia of Pregnancy.—As indicated previously 10 grams of hemoglobin (64 per cent) during the latter part of pregnancy is a low normal value. This is due to hemodilution. Below this value a true anemia of two types may be found. Most common, an iron deficiency type, may be treated as such. The other, a macrocytic anemia has been termed "Pernicious Anemia of Pregnancy". It is due to a deficiency in the diet, chiefly of protein. Supplemental protein and folic acid, 10 to 15 mg. daily, will correct such an anemia. Liver extract given intramuscularly is also effective, but vitamin B_{12} is not.

It should be emphasized that the large number of pharmaceutical compounds combining all the known vitamins, copper, cobalt, B_{12}, folic acid, liver extract, and iron are needlessly expensive and confuse an otherwise clear clinical and hematologic picture. Their use is to be condemned as the specific needs of the patient is masked by this improper therapy.

Pernicious Anemia and Related Macrocytic Anemias

Pernicious anemia is the most common of the macrocytic anemias seen. Its recognition and differentiation between other macrocytic anemias is important because death ensues within three years in almost all patients unless adequate treatment is given.

Treatment of pernicious anemia should be adequate to arrest or prevent combined systems disease. Inadequate therapy, especially with one of the above mentioned oral combinations of vitamins, liver, folic acid, and minerals, may give a false sense of security by producing a hematologic response, but allowing spinal cord damage to progress. It is for this reason that folic acid is no longer regarded as safe as the sole therapeutic agent for this disease.

Liver extract given intramuscularly as 15 units of vitamin B_{12}, 15 micromicrograms daily for one week, then twice weekly until the blood picture is normal is considered adequate. Following this, a maintenance dose in the same amount every three weeks is considered sufficient. For those patients with early cord changes the dose may be doubled or tripled and given weekly as neurologic improvements are sometimes slow. Physiotherapy is helpful in such problem cases. Vitamin B_{12} has become more popular than liver injections because it is cheaper, more easily standardized, less painful, and no allergic reactions have been noted.

Nutritional Anemias.—These include the macrocytic anemias of tropical and non-tropical sprue, of pregnancy, those anemias following gastrointestinal surgery, and megaloblastic anemias of infancy.

All have one common characteristic in that folic acid in oral doses of 10 to 20 mg. daily is effective therapy. The addition of proteins in the diet of these anemias of pregnancy is advisable. Likewise, in these an iron deficiency requiring iron may co-exist. In the megaloblastic anemia of infancy, vitamin C

deficiency may exist, and 150 mg. orally each day as a prophylaxis is recommended.

Other Macrocytic Anemias.—Those anemias seen in hypothyroidism, liver disease, and intestinal parasites, such as the fish tape worm, do not respond to specific therapy until the underlying disease is treated. When this accomplished, treatment is like that of pernicious anemia.

Summary

Treatment of some of the more common blood and related diseases encountered in general practice has been given. Particular stress has been given those preparations and methods that are available to every physician, regardless of his location or facilities.

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ABOUT 1900 Alexis Carrel predicted the replacement of diseased or injured areas of the vascular system with suitable counterparts removed from another body. Indeed, by the application of precise methods, he actually accomplished this feat in the laboratory. The reproduction of such success in the human patient with an analogous clinical situation, however, was not so simple, for several reasons. In the first place, instruments were not then available for the control of large vessels without injury to them; moreover, an anastomosis was usually performed with variable degrees of longitudinal tension because of the lack of a suitable prosthesis to bridge any gap resulting from excision. Finally, the clinical surgeons usually failed to reproduce in the operating room the delicate aseptic technique used by Carrel in the laboratory. In a few successful cases veins were used as autografts but the disastrous results of vascular failures made a lasting impression. Enthusiasm accordingly waned and was not revived until the second World War. At that time, however, available methods of vascular repair gave no better results than ligation of major arteries.

Nevertheless, those failures furnished the stimulus to improve and standardize vascular techniques and to seek a dependable graft, when end-to-end approximation was impossible. As had been taught by Carrel, "latent life" or cellular life was thought by the early investigators to be a prerequisite for survival of a graft. The feeling that life was necessary to preserve mechanical function was conclusively disproven by Guthrie, a contemporary of Carrel, and by Levin and Larkin in 1907. Both Guthrie and the later two investigators implanted formalinized and obviously dead arterial segments with good functional results. Even though the graft itself became a calcified sequestrum, its ability to conduct blood was not particularly impaired. The recognition that the engrafted tissue served only as an arbor for cellular invasion by the host was very important in the development of current techniques.

At the University of Virginia Hospital in 1952 vascular grafts were difficult to obtain and problems requiring their use had to be treated by the best available alternative methods. Consequently, it was decided to assemble the apparatus for one of the three recently developed methods of preservation. The liquid media method (Gross, Swan) was thought to be unnecessarily laborious and wasteful. The preservation of frozen grafts with dry ice refrigeration involved considerable expense. Preliminary reports of freeze-dried arterial segments seemed to be the most promising. After consultation with the Staff of the Tissue Bank of the National Naval Research Center, in Bethesda, plans was made for establishing a freeze-dried artery bank at Charlottesville. Since the commercial freeze-driers were found to be unnecessarily large and expensive, a smaller unit designed by Pate and Strong, of Bethesda, was chosen. This was constructed by the machine shop of the University's Physics Department for about $400.00. An additional $500.00 was required for a Stokes-McLeod vacuum gauge and a Welch Duo Seal vacuum pump.

The completed apparatus (Fig. 1) is composed of a vacuum pump (left), an upright water condenser cooled to -40 degrees C. by the refrigeration unit below the table (center) and a manifold with eight outlets which attached to large test tubes immersed in a mush of CO_2 ice and alcohol in a Sears Roebuck portable ice box (right).

The apparatus was first proven efficient by animal experimentation. Twenty-six mongrel dogs were used as recipients for aortic segments removed and freeze-dried from donor animals 2-3 months before. In these animals there was only one graft failure due to thrombosis, an incidence of 96.2% graft successes.

Following the successful animal work, a human artery bank was developed on the same plan. Aortic segments were obtained from accident victims under aseptic conditions. These were freeze-dried and stored in vacuum bottles (Fig. 2) available for reconstitution and use in vascular problems. To date these segments have been used to replace obliterated segments of external iliac arteries in two patients. In both cases there has been an obvious increase in the arterial supply to a previously ischemic extremity. In one case there has been a return of dorsalis pedis and posterior tibial arterial pulses which were absent preoperatively.

One abdominal aneurysm has been attacked. This was a huge post-traumatic (mule kick) abdominal aneurysm from the renal arteries to the iliac arteries.

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* Abridgement of thesis submitted to Graduate Faculty, University of Virginia, in partial fulfillment of requirements for degree, Master of Science.

bilaterally. Because of proximity to the renal arteries no margin of aorta was available for suture. Therefore, the aorta was controlled above and the aneurysmal sac was entered. A freeze-dried homo-

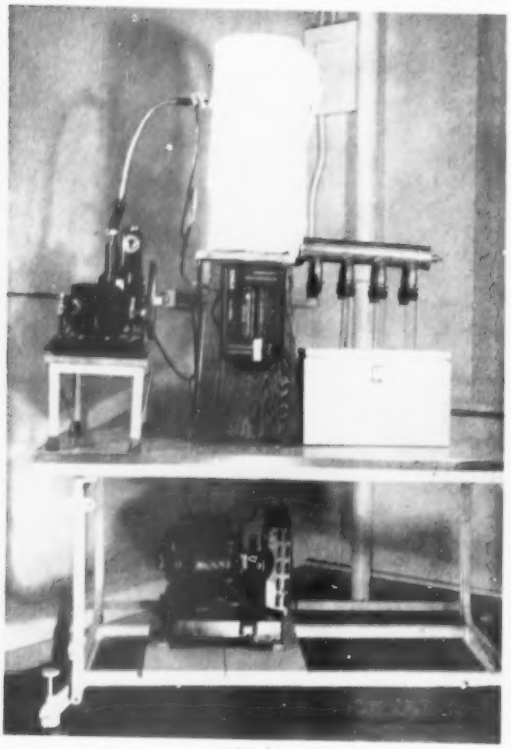

Fig. 1.

graft was sutured to the aortic ostium above and to the two iliac ostia below, within the sac. The graft was successfully implanted but a leak developed posterior to the superior anastomosis necessitating removal of the graft. The sac of the aneurysm was plicated and the patient recovered and has continued to do well to date.

Conclusions

1. Freeze-dried homografts are suitable vascular prostheses to bridge arterial defects.
2. They serve as a scaffold for cellular invasion from the recipient host.
3. Despite their non-vital nature, they serve as dependable, adequate mechanical conduits of blood.

Summary

A freeze-dried human artery bank established at the University of Virginia Hospital in November, 1953, is briefly described. The freeze drying apparatus was constructed by the University of Virginia Physics Department and standardized by animal experimentation before clinical use was undertaken. Brief accounts of three clinical experiences with freeze-dried arterial homografts were given.

The authors wish to acknowledge their indebtedness to Dr. Robert Caldwell for operative assistance, to Mr. Boyd Perry for technical aid, and to Miss Ann Russell for photographs.

Fig. 2.

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Speculations on the Common Cold

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THE common cold is one of the most disastrous forms of pestilence that mankind has ever known. After all the years, however, the response of the patient remains as artlessly simple as the crying of a baby, and far less effective. I am convinced that a brighter future is possible, if we will take a determined stand. We must have the courage of our convictions, which must come from our own experience. We are fortunate in one respect, at least, that the most completely equipped laboratory available anywhere for the study of this disease is one's own body.

An epidemic of colds is commonplace. It is seldom, if ever, simple. Actually there must be a complexity of conditions which potentiates and characterizes each and every epidemic. Colds are found rarely in the summer months. This fact raises the question of a carrier state. Also, it suggests that some injury or unfavorable environmental condition of the nasal mucosa is a factor in the incidence of the disease. Further, there must be a susceptible population with opportunity for direct transmission. There may be only one strain of the cold virus present. More rarely a second epidemic may be superimposed on the first. Then we must remember that our susceptible population will be exposed to any number of bacterial pathogens. I think it is generally agreed that these bacteria are secondary invaders of the respiratory tract. I feel, personally, that they are not only secondary in time to the common cold, but that they are secondary in importance also, in spite of what is sometimes their extraordinary, and even fatal, virulence. Finally, it has been interesting to me to find some evidence from personal experience that a mild infection, apparently sensitive to penicillin, may precede, and perhaps determine, the incidence of a cold.

Clinically, the common cold is an acute, infectious, catarrhal rhinitis. It may be either endemic or epidemic. The onset is relatively sudden, but somewhat variable. It may seem to run its course in three or four days but the actual duration is often in doubt. The symptoms of the cold dovetail so with those of the complications that one can scarcely say where the one begins and the other ends.

Bryan and Bryan[1] have done much recently to clarify the pathology of acute upper respiratory infections. Their studies of nasal secretions revealed a massive exfoliation of ciliated columnar epithelial cells, chiefly from the second to the fifth day of the disease. They thought the location of the disease probably was in the nucleus of the epithelial cells. Their findings chart the course of the common cold with its obvious self-limitation. They represent graphically the tremendous damage which is done to our nasal defenses. Thus the cold and its complications are bound inextricably together. A discussion of the cold without reference to its complications would be meaningless.

The prophylactic treatment of the common cold may be effected some day through immunization. At present, we try to avoid chilling of the body and excessive drying of the nasal and pharyngeal mucosa. Humidification of the winter air is certainly desirable. Isolation is seldom more than a gesture, but if we really care whether we take a cold or not, it must be rigidly enforced.

All further attempts and methods of treatment have these goals: to make the patient comfortable, to shorten the course of the disease, and to prevent or reduce its complications. I will not attempt to estimate how frequent and serious these complications may be, but I would like to suggest that not all patients present themselves soon enough for the etiology of their misery to be evident. There are many other cases where the origin of the pathological condition is lost to memory.

The question naturally arises, can we achieve these goals? In the past, there has been much pessimism in the minds of our profession. This pessimism is mistaken. I believe also that the same measures which make the patient truly comfortable are those which will also control the sequelae. Success depends, however, on an appreciation of the pathology. It will follow the rigid adherence to a simple technic. Our whole aim must be to protect a severely inflamed and vulnerable nasal membrane. There must be no compromise with this ideal.

The greatest insult which is universally perpetrated upon the nose is the voluntary act of blowing and

*Read before the Southwestern Virginia Medical Society, at Roanoke, Va., September 16, 1954.

1. Transactions of the American Academy of Ophthalmology and Otolaryngology, p. 171, 56, 1952.

snuffling. The greatest injury of all will result from an inspirational effort. Here the intrachoanal air pressure is reduced, the vessels fill, and the mucosa swells. Conversely, a forcible expiration will flatten out the mucosa, and the damage will be definitely less. Sneezing is supposed to be harmful, but it is rarely important. One can protect himself, in sneezing, by holding the head back and keeping the mouth open. If one wishes to do his utmost to soften a sneeze, he should hold up one or both arms. This will greatly reduce the contraction of the thoracic cage. Patients will complain bitterly of sneezing, but I am convinced that what they do before and after the sneeze is more important. I would suggest that the prolonged and probably uneven pressure waves produced by voluntary blowing and snuffling build up destructive vibrations in the blood-filled nasal mucosa. I do not believe that one may blow his nose during a cold even once without important damage.

When we are confronted with a patient, snorting, snuffing, hawking, and rasping his nose with a lump of kleenex, it is quite obvious that we must proceed cautiously if we hope to arouse his interest and to prepare him to accept new ideas. An explanation of the pathology and physiology will appeal to many patients. One may stress the fact that the nose has a definite function. It warms and moistens the air so that it may meet the specifications of the bronchial tree and lung. A sick nose cannot be expected to function like one that is well. The intelligent patient will appreciate that the blockage of the nose which he experiences is a form of splinting. It can be pointed out to him also that drainage of the nasal secretions depends on the ciliated epithelium, which operates efficiently only if it is moist, a condition which is favored by congestion of the nose with narrowing of its passages. Also the healing process, in general, demands an active hyperemia. We must, above all else, condition the patient to accept the idea that the aim of treatment is not to "open" the nose, but to heal it.

There are patients too immature to tolerate either the thought or threat of a congested nose. Other patients are faint hearted and need encouragement. In general, the things which are hard to do are those which we think are not worth doing. It is important that the patient be prepared to experience a certain amount of nasal congestion but it is not necessary to abandon him at that point. Rather we may promise to all that proper observance of hygienic principles will permit the nose to open by itself and that it will remain open.

I see very little need, or excuse, for the use of nose drops. This does not mean that nasal decongestants cannot be used in such a way, for instance by the physician, that they will be of benefit. I concede also that their use in infants presents a special case which I shall not consider here. I will only say that self-medication with nasal decongestants is as useless as it is unsafe. The most positive, dramatic and enduring relief for the congested nose will result from leaving it absolutely alone.

Rarely, if ever, can a patient be trusted to carry out such advice. It becomes necessary to protect him against himself, and the ideal solution to this difficult problem must be acceptable both aesthetically and socially. I am still looking for such a solution.

Blowing the nose in any form is prohibited. I offer a substitute technique which consists of compressing the soft parts of the nose gently, evenly and slowly with a cotton or linen handkerchief. Haste, which is almost universal, will irritate the nose as well as prevent the absorption of the secretions. This technique involves a generous supply of adult-sized handkerchiefs. It is not adapted to the lazy person but it is effective.

Many patients obtain relief from covering the nose and mouth with a handkerchief or surgeon's mask. While a mask suggests solicitude for others, its use is often limited to the privacy of the bedroom. The use of a mask is followed almost at once by subjective improvement. The patient no longer feels that his nose is ever ready to drip. Perhaps there is a psychic effect, but certainly there is a physical improvement also. The mask will pick up moisture from the saturated air as it is exhaled and, conversely, it will tend to moisten the dry air from the outside on inhalation.

Sometimes, because of the patient's past experience, or from the urgency of the present situation, I dare to meet the problem head on with a fool-proof method. This consists of fastening a light gauze pad before the nostrils with adhesive tape. The use of cotton tampons loosely in the very tip of the nose would serve the same purpose but requires even greater cooperation. These precautions can be of the greatest importance. They can be relaxed whenever the patient can be trusted to treat his air passages with respect. A few patients learn quickly. Others never learn. Many are quite positive they have followed all instructions, but the history which the patient gives in this regard is generally without meaning. Nothing is valid except that which we see.

Undoubtedly the patient would be better off in bed. First, this would reduce the work load of the respira-

tory tract with a train of benefits. Second, the patient would be free to concentrate his attention on the protection of the nose without pressure from tribal conventions.

I believe it is important for the patient to sleep on the side, alternating the position, according to the circumstances. It is interesting that Hippocrates noted this was the position typically assumed by persons in health. Many patients recognize that the dependent side of the nose tends to become congested, while the upper side will become clear. Perhaps there are many among us who appreciate what an all-important aid the position of the patient can be to both circulation and drainage. Such a technique may sometimes appear to interfere with satisfactory sleep, but sleep is of secondary importance. For those who wish to lie on the back, it will help to keep the head slightly elevated and turned to one or the other side. Certainly in the early stages of a cold, alteration of posture according to the state of the nose, or ears, will have the definite effect of reducing complications.

In the beginning of a cold the secretions are copious and quite fluid. The problem of drainage is imagined, rather than real. We all see patients who are obsessed with fear of their nasal secretions. This fear is often chronic with unhappy, distressing results. My own observations, while limited, suggest that the original nasal infection is highly specific, and the secretions which derive from it are relatively innocuous to other tissues. No matter how desirable cleanliness, as interpreted by the laity, may be, every principle of nasal hygiene is embraced by these two words, *be gentle*.

In the later stages of a cold, help in the removal of secretions would be appreciated, even if seldom necessary. I believe it would be worth while for the patient to visit his physician for this purpose. A few patients may be trusted to make use of a normal saline solution administered by a Birmingham douche. Also, a few drops of a solution such as alkalol may comfort those patients with thick, gummy secretions in the nasopharynx. If the nose must be blown, the handkerchief should be held in front loosely.

I will say very little about the use of medicines because such treatment relates more to the management of complications than of the cold itself. I am especially interested in the use of thyroid in selected cases and where it is tolerated, at least briefly. I can imagine that antihistaminics may help certain patients with respect to secondary invaders. I think that the sipping of hot drinks is a useful measure which should always be kept in mind. I am sorry the role of the antibiotics is not better understood. It is true they have no effect on the cold itself. It is also my belief that one would rarely need them would he adhere strictly to the principles and technique which I have suggested or described. But life is not ideal. My experience has been that many and probably most of the patients who present themselves for treatment of a "cold" have already experienced a secondary infection. Such patients certainly can be helped by one or another of the antibiotics. One must assess the patient carefully, his emotional stability, his present condition, and his past experience, all this in the light of all we know about the current epidemic. Sometimes it will be a mistake to administer an antibiotic. More often the mistake will be that we did not administer enough.

Summary

I have suggested the great complexity of the epidemologic factors associated with the common cold. Both the immunologic strain and its virulence may vary. The onset of a cold is often determined by some insult to the nasal mucosa. This may be environmental, and conceivably may be bacterial. Again, there are almost unlimited possible combinations of the cold virus with secondary bacterial invaders, and unlimited possible sequelae. The common cold, itself, does not kill, but it turns the key which lets the killer in.

The nasal mucosa is tremendously damaged by the cold, but voluntary mechanical injury is even more important, and will determine, in general, the incidence and course of complications. An effective, prophylactic technic is possible. It is not difficult, and any patient may learn. The watch word is "be gentle".

No history of a cold is complete which does not inquire into the position of the patient during sleep. Attention to this detail will insure a rich reward.

When the patent first presents himself for treatment of a cold, it is probable that secondary invasion has already begun, and the desirability of specific treatment must be considered.

Finally, *we can do something for a cold*. There is no greater fallacy than to think our only treatment is to make the patient comfortable. Treatment, to be effective, must be adequate. Half-hearted efforts will fail. The patient must be educated and aroused, but, first, we must arouse ourselves.

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Treatment of Snake Venom Poisoning With ACTH and Cortisone

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RECENTLY two of the authors[1] reported their observations of the favorable clinical response to the effects of cortisone or corticotropin in the case of three children who had been bitten by venomous snakes. The use of these substances in the treatment of ophidian venenation, in addition to the standard surgical and specific therapy, had not been previously reported in the literature. This report, summarizing the clinical evaluation of response in 15 additional cases, is provided to further clarify the role of these drugs in this therapy. Two of the cases here reported have been treated by the authors, and the remaining 13 have been obtained from a study of medical records, and, in addition to this, in four of the cases, from detailed reports from the attending physicians. Medical records were made available for this study by the following institutions: Clinch Valley Clinic Hospital, Richlands, Va.; Lee General Hospital, Pennington Gap, Va.; Lynchburg General Hospital, Lynchburg, Va.; Mary Washington Hospital, Fredericksburg, Va.; Medical College of Virginia Hospitals, Richmond, Va.; St. Mary's Hospital, Norton, Va.; and University Hospital, Charlottesville, Va.

The extent of morbidity following the bite of venomous snakes of a single species has been shown to be highly variable[2]. It is related to the degree of toxicity and volume of venom introduced through the wounds, the effectiveness and rate of distribution of the venom and of toxic substances in the edema fluid from the wound into the lymphatic and systemic circulations, and by the extent of the allergenic or anaphylactoid response of the victim to the introduced foreign protein. The bite of a poisonous snake is not invariably followed by the development in the patient of venom poisoning. In a recent report[3] it was pointed out that in 18 cases in which the snake causing the injury was positively identified as a highly venomous species, only 12 of the patients showed any systemic signs of venom intoxication. An attempt to clinically evaluate the degree of seriousness of the intoxication was used recently[4] but the clinical criteria distinguishing between light, medium, severe, and critical cases were not given. To clarify the roles of cortisone and corticotropin in ophidian venenation therapy the cases presented here are classified clinically into three degrees of severity as determined from the extent of local and systemic involvement. The ranking of a case into the groupings of minimal, moderate, or severe venenation is based upon the severity of the presenting signs and symptoms, and upon the course of the case during the first twelve hours of hospitalization, as follows:

Grade I. Minimal venenation. These include cases having a history of suspected snake bite plus localized signs including the presence of one or more puncture wounds (occasionally obscured by an edematous tumefaction surrounding the wound site), moderate pain or throbbing localized at the fang wounds, and an area of edema extending not more than a few inches from the point of initial venenation. The hospital course in the subsequent 12 hours provides no evidence of systemic involvement.

Grade II. Moderate venenation. Patients classed in this group demonstrated the signs of Grade I poisoning during a brief early stage in their intoxication, but soon had more severe and widely distributed pain, and more marked edema which would continue to progress up an extremity toward the trunk during the first 12 hours of hospitalization. In most cases the edematous area involved about half of the distance between the bite site and the trunk; regional lymph nodes were palpable and tender. Nausea, vomiting, and giddiness were usually present. Petechiae and ecchymoses were restricted to the area of edema. A low grade temperature usually developed and persisted for from one to four days.

Grade III. Severe venenation. These patients may resemble Grade I, and frequently resemble Grade II on admission, but the course of their intoxication is rapidly progressive. These patients may arrive in shock within a few minutes of the time of injury.

Within 12 hours the edematous area extends from a bite site on an extremity to or involving part of the trunk. Petechiae and ecchymoses are frequently generalized in distribution. During the first 12 hours of therapy the pulse becomes rapid and thready, the temperature becomes subnormal, and the patient approaches a state of shock.

Of the 15 cases briefly reported here five are Grade I, seven are Grade II, and three are Grade III.

Report of Grade I Cases

Case 1. A 5-year old white male child was admitted to the University of Virginia Hospital on June 29, 1953, because he had received a copperhead bite on the fourth digit of his left hand. He arrived in the emergency room about 30 minutes after the accident; temperature on arrival was 98° F., and the patient was in no acute distress. Immediate therapy consisted of the use of tourniquet proximal to the wound, and incision and suction of the puncture sites. The patient was not sensitized to horse serum, and he was promptly administered 15 cc. of antivenin, tetanus antitoxin, antibiotics, and symptomatic drugs. He was put at bed rest with his left hand immobilized and chilled with ice bags. ACTH (25 mgm. b.i.d.) was started at once. "Recovery followed a rapid and benign course, and the patient was dismissed on the third hospital day."

Case 2. A 5-year old white male was admitted to St. Mary's Hospital, Norton, on May 28, 1953, because of rapid swelling of the right ankle, accompanied by pain and ecchymosis. Although snake venenation was suspected, fang marks could not be distinguished. The temperature on admission was 99° F., and the patient was in moderate pain. Antivenin therapy was initiated, and cortisone (12.5 mgm. t.i.d.) was ordered. The edema was progressive, and a second ampule of antivenin was injected on the second day. The cortisone therapy was continued until the patient was dismissed on the sixth day. "The patient had a relatively mild course and responded well to therapy."

Case 3. A 7-year old white male was admitted to Lee General Hospital on July 29, 1953, because of a snake bite on his left forearm. He had been bitten three hours prior to admission by a small timber rattlesnake. Temperature on admission was 100° F., and the patient complained of pain and throbbing in the injured area. There was a slight edema at the time of admission around the fang wounds. The extent of venenation was not considered severe enough to require antivenin; the patient received antihistaminics and ACTH therapy. He improved rapidly and was dismissed asymptomatic after 24 hours of hospitalization.

Case 4. A 45-year old white male was admitted to Mary Washington Hospital on July 8, 1953, because of a copperhead bite on the right hand. Temperature on admission was 99.5° F., and the patient complained of throbbing pain in a moderately edematous hand. Initial therapy included the use of tourniquet, and incision and suction of the fang wounds. The hand was immobilized and kept draining with hot moist compresses. Antivenin (15 cc.) tetanus antitoxin, antibiotics, and symptomatic drugs were administered. Cortisone (25 mgm. q.i.d.) was started at once. Emesis occurred two hours after admission; at this time a mild generalized urticaria was first evident. The patient improved rapidly and was dismissed on the second day of hospitalization.

Case 5. A 47-year old white female was admitted to Mary Washington Hospital on May 24, 1953, because of a copperhead bite on her left index finger. The injury took place on the day prior to admission. Temperature was 99° F., and the patient complained of a throbbing pain in the left hand. The left hand and wrist were moderately edematous and tender. Initial therapy included the use of tourniquet, and incision and drainage of the puncture wounds. Antivenin (15 cc.), tetanus antitoxin, antibiotics, and symptomatic drugs were administered. ACTH (25 mgm. q.i.d.) was started at once. The patient had a mild course, although repeated nausea and vomiting occurred during the first night. On the second day the dosage of ACTH was halved, and late on the second day the patient was dismissed as markedly improved.

Comment on Grade I Cases

These five cases of venenation are typical of mild localized venenations associated frequently with the bites of small pit vipers like the copperhead, and occasionally with smaller specimens of the larger species such as the timber rattlesnake; cases of mild venenation may be caused by large rattlesnakes. These cases present little therapeutic challenge, and they provided little opportunity to evaluate clinical influence of cortisone and corticotropin except perhaps in influencing the brevity of the urticaria that developed secondary to the injection of antivenin and tetanus antitoxin in *Case 4*. It cannot be shown that cortisone or ACTH accelerated recovery of these patients, but clinical responses indicate that they certainly did not prolong the period of recovery.

It is never prudent to presume that a venomous snake of small size and incapable of injecting a

large volume of venom, is incapable of causing severe venenation. In one case studied incidental to this series a Marine at Quantico picked up a six inch copperhead by the tail "in order to kill it", and was bitten on the finger. In spite of receiving prompt first aid and hospitalization within 30 minutes of the injury, he had a clinical course associated with a Grade III venenation.

If one could presume that severe venenation had taken place in these five cases, and that cortisone or corticotropin had sharply altered the clinical course by reducing morbidity, the response attributed to these drugs would be as remarkable as in the case cited by Cluxton[4]. The invalidity of this supposition becomes evident when one studies the clinical course of patients treated without these substances. In a series of 200 cases recently reported by one of the authors[5], the type of clinical response noted here was frequently found in cases not treated with ACTH or cortisone. As Ellzey[6] sagely pointed out many years ago, "The copperhead is unquestionably far less venomous than it has the credit of being. It is in fact very doubtful whether the bite of the copperhead is at all dangerous to the life of a healthy adult, and this accounts for the supposed success of so many absurd and useless remedies." Little or none of the excellent clinical response in these five cases of minimal venenation could be attributed to the use of ACTH or cortisone.

Report of Grade II Cases

Case 6. A 5-year old white female was admitted to the University Hospital on July 6, 1953, because of a copperhead bite on the lateral aspect of the left foot. The injury occurred three hours prior to admission; fang wounds were observed on the left foot, and local edema involved the foot and ankle. Temperature on admission was 100.0° F. Initial therapy included the use of a tourniquet, and standard incision and suction of the puncture sites. Antivenin (15 cc.) tetanus antitoxin, antibiotics, and ACTH (25 units per day) were started. The patient was provided bed rest, and the left leg was immobilized in an elevated position with ice bags over the edematous area. The swelling progressed during the first 24 hours of hospitalization; at that time the entire foot and distal half of the leg were markedly distended. The patient continued to have a low grade fever (100.0° F.) until the fourth day, when her temperature returned to normal. The ACTH therapy was continued through the third hospital day, and the patient was dismissed on the fourth.

Case 7. A 5-year old white male was admitted to the Medical College of Virginia Hospital on August 28, 1951, because of a snake bite (presumed to be due to a copperhead) on the dorsum of the right foot. He was bitten one hour prior to admission, and his temperature on arrival was 99.4° F.; he complained of pain. The right foot and leg were markedly edematous on admission. Initial therapy included the use of tourniquet, and incision and suction of the fang wounds. Antivenin (15 cc.), and symptomatic drugs were administered. Cortisone (50 mgm. *stat.*) was injected; six hours later a second 50 mgm. was provided. The cortisone dosage continued the same on the second day. A few hours after admission the patient spiked a fever (103° F.) which gradually subsided during the next 12 hours; the patient was afebrile on the second day. The swelling in the right foot advanced markedly during the cortisone therapy.

Case 8. A 6-year old colored male was admitted to the Lynchburg General Hospital on August 6, 1951, because of a snake bite (probably copperhead) on the left hand two hours previously. Temperature on admission was 100.0° F., and the patient appeared to be in severe pain. A single puncture wound was found in the web space between the thumb and forefinger, and there was marked swelling of the left hand, and moderate edema extending up the arm to the elbow. Immediate therapy consisted of the use of a tourniquet above the area of swelling, and incision and suction over the wound site. The arm was immobilized, and the wound kept draining with wet compresses and ice packs. The patient had a positive skin test for sensitivity to horse serum, and the antivenin was therefore administered at spaced intervals by the "desensitization" method. ACTH was given simultaneously (25 mgm. q.i.d.); antibiotics and symptomatic drugs were also administered. After 24 hours it was possible to discontinue the ACTH; the patient had a smooth hospital course and was dismissed on the third day.

Case 9. A 7-year old colored male was admitted to Lynchburg General Hospital on June 28, 1951, because of a snake bite (probably copperhead) about two and one-half hours previously on the left foot. Admission temperature was 100° F. and the patient complained of pain. A single puncture wound was found on the dorsum of the left foot at the base of the web between the second and third toes; the puncture was surrounded by ecchymoses and marked swelling extended from the foot up the ankle and leg. Initial therapy included incision and drainage of the puncture wound; antivenin (15 cc.) and

symptomatic therapy were started. ACTH (25 mgm. q.i.d.) was started immediately. Six hours following admission the edema was still progressing up the leg, and a second ampule of antivenin was injected. The patient became afebrile for the first time on the third day, and was dismissed on the fifth day with the swelling, discoloration, and pain largely absent.

Case 10. A 15-year old white male was admitted to University Hospital on July 14, 1953, because of a copperhead bite on his left index finger. Temperature on admission was 99° F., and there was a moderate diffuse swelling of the left hand, wrist, and forearm. Tenderness was marked in the anticubital fossa, and absent in the left axilla; pulse rate was not abnormally rapid. Prior to admission the patient had received first aid consisting of tourniquet proximal to the wound, and incision and suction of the fang wounds. Initial hospital therapy included antivenin (15 cc.), tetanus antitoxin, and symptomatic drugs. Cortisone (25 mgm. q.i.d.) was started; the left arm was immobilized, and moist dressings under ice bags were applied over the edematous area. The swelling rapidly subsided, and the patient was discharged as asymptomatic on the fourth day.

Case 11. A 14-year old white male was admitted to Clinch Valley Clinic Hospital on July 10, 1953, because of a copperhead bite one hour previously on his left index finger. Temperature on admission was 99.4° F.; radial pulse rate was 100 per min. The patient was in moderate pain, and there was considerable swelling of the left hand and distal third of the forearm. Prior to admission the patient received first aid consisting of a tourniquet proximal to the injury site, and cruciate incisions through the fang wounds. Immediate therapy consisted of immobilizing the left arm in a dependent position, and the application of cold compresses over the edematous area. Antivenin (15 cc.) tetanus antitoxin, antibiotics, and cortisone (25 mgm. q.i.d.) were administered. On the following day the edematous region had not extended past the elbow, swelling in the forearm and hand had subsided somewhat. During the next two days the temperature remained normal, and the patient was free of pain; he was dismissed on the third day with slight swelling persisting in the left hand.

Case 12. A 58-year old white male was admitted to University Hospital on May 30, 1953, because of a snake bite (species unknown) 15 minutes previously on the first phalanx of the middle finger, right hand. Temperature on admission was not elevated; pulse rate, 72; blood pressure, 115/80. There was local edema and throbbing of the right hand. A single fang puncture was incised, and suction was maintained over the incision for 30 minutes. Initial therapy included injection of antivenin (15 cc.) tetanus antitoxin, antibiotics, antihistaminics, and symptomatic drugs. The swelling rapidly progressed up the arm; the right arm was immobilized in an elevated position, and cold compresses were applied over the edematous area. Cortisone (25 mgm. q.i.d.) was started. Twenty-four hours later the swelling had not diminished appreciably, and a second ampule of antivenin (15 cc.) was injected. There was no elevation of temperature; and no nausea, emesis, weakness, dizziness, or signs of systemic involvement. The patient was dismissed on the fourth day with a slight residual edema of the involved hand. Three days later the patient returned to the outpatient department with the complaint of itching, pain, and swelling of the right arm. He was running a low grade fever, and his arm was erythematous, inflamed, tender, indurated, and edematous; involvement of the extremity was most pronounced in the vicinity of the fang wounds. Treatment of the involved arm including antibiotics, immobilization with elevation, and warm soaks resolved these conditions within 24 hours.

Comment on Grade II Cases

These seven cases are typical of an intermediate clinical response to crotalid venom poisoning in which there is a pronounced local reaction and a minimal systemic one. It is to be noted that the use of cortisone or corticotropin early in the therapy did not arrest the local tissue reaction or the edema; in four of the patients progressive edema persisted for 24 hours. The use of these drugs did not prevent an elevation of temperature to 100°–101° F. in two of the cases, and a spiking fever of 103° F. in the third. Nevertheless, it was the impression of the clinicians attending these patients that there was a distinct reduction in morbidity which justified the use of cortisone and corticotropin in the therapy.

Report of Grade III Cases

Case 13. A 5-year old white male was admitted to Clinch Valley Clinic Hospital on July 5, 1953, because of the bite of an unidentified venomous snake on his right leg ten hours previously. The child was obviously ill on admission, having a temperature of 101° F., and a pulse rate of 120. Two fang punctures were found on the medial aspect of the right leg, and there was marked swelling of the entire

right leg and distal third of the thigh. Initial therapy included the use of tourniquet, incision, and drainage; the patient was administered antivenin (15 cc.), tetanus antitoxin, and symptomatic drugs. Cortisone (25 mgm. q.i.d.) was promptly started, and the right leg was immobilized and kept moist with cold wet dressings. In 24 hours the patient was afebrile, and the pulse rate was 80. There was no extension of the edematous area, and the induration of the leg and thigh was diminished; edema in the distal thigh was now minimal. The patient was dismissed on the third day as asymptomatic; four days later he was again examined, and found to have a slight residual swelling of the right leg.

Case 14.—A 7-year old white male was admitted to Lee General Hospital on June 23, 1953, because of a copperhead bite sustained on the left ankle 30 minutes previously. The patient was in profound shock on admission; temperature was 96.0° F. A single puncture wound was present on the inner aspect of the left ankle, and a moderate amount of swelling and discoloration were present in the area. History was obtained that this patient had just returned from an allergy clinic and was known to be extremely sensitive to horse serum. It was felt by the attending physicians that it would be extremely dangerous to administer antivenin or tetanus antitoxin. The alleviation of the shock state was initiated first, with the use of oxygen, blood transfusion, IV fluids, external heat, vitamin K, antihistamines, ACTH (0.5 cc. t.i.d.), and other supportive measures. Sedatives, hypnotics, and analgesics were administered as soon as the normal blood volume—vascular bed relationship was reestablished. Three hours after admission the patient passed a grossly bloody stool. During the first 24 hours the edema and ecchymoses progressed to the groin, and small petechiae were widely distributed over the other extremities and trunk. ACTH was continued on the second day, and cortisone (25 mgm. q.i.d.) was administered from the third to the fifth day. On the eleventh day the patient was dismissed approximately asymptomatic.

Case 15.—A 56-year old white male was admitted to Lynchburg General Hospital on June 18, 1951, because of a bite by a large copperhead on his right thumb two and one-half hours prior to admission. Temperature on arrival at the emergency room was 100° F., and he complained of "severe, excruciating burning pain" in the bitten extremity. The puncture wounds were bleeding, and the hand, wrist, and distal third of the forearm were edematous, indurated, throbbing and tender. A skin test showed the patient to be sensitive to horse serum. He was "desensitized" by the administration of progressively larger fractional doses at 30 minute intervals, receiving ultimately 15 cc. of antivenin. In addition he was given antihistaminics, antibiotics, IV fluids, sedatives, and hypnotics. On the second day the patient developed a typical serum reaction of urticaria and angioneurotic edema. ACTH (10 mgm. q. 4 h.) was started along with antispasmodics, antihistaminics, and calcium gluconate. The serum reaction was rapidly controlled, and by the fifth day the patient had little residual edema; cellulitis developed around the wound site and on the eighth day when the patient was dismissed it appeared that a slough of skin from the involved thumb was imminent. ACTH therapy was continued from the time of the serum reaction to the dismissal of the patient.

Comments on Grade III Cases

These three cases of venom poisoning involved marked systemic intoxication and allergic reactions, and the latter two were certainly life-endangering. In *Case 14* Dr. G. B. Setzler and Dr. H. A. Kinser[7] consider the patient's response to cortisone and ACTH was life-saving, and they add that the amount of tissue destruction was greatly diminished by the use of these drugs. In *Case 15* the ACTH was given credit for playing an important contributing role in bringing the angioneurotic edema and urticaria under prompt control.

Discussion

Cluxton[4] reported that in a single case of copperhead bite treated with ACTH there was "sudden relief of pain" and progressive disappearance of other toxic signs and symptoms following the use of a 40 mgm. injection repeated once, in two hours. His report mentions the use of no other therapy in the management of this patient, but the patient was discharged five hours from the initiation of therapy without any residual signs or symptoms except for the two fang marks. Experience of two of the authors[3] with three cases, and this review of 15 cases, suggests that Cluxton was describing a case where ACTH was not given a clinical trial against appreciable venenation; no such astonishing responses have been noted in this series.

Minton,[5] in personal correspondence, has reported the results of treating snake venom poisoning with ACTH in mice; his findings are that the survival of the mice is in no way improved by the use of ACTH even though his venom injections consisted

of as little as 2 LD 50. He states the ACTH was given at intervals of 10, 15, and 60 minutes after the injection of venom, and the mortality in both controls and ACTH-treated mice was nearly 100 per cent. Thus, he states[9] that he has been unable to show any beneficial effect from the use of this drug. This evidence strongly suggests that cortisone or corticotropin have no specific effect on the snake venoms tested or on the toxic edema fluids produced by these venoms.

In their earlier report, two of the authors[1] stated that following the administration of cortisone remarkable symptomatic relief occurred within a few hours. "The temperature returned to normal, pain subsided, and the general toxic state disappeared. Objectively, the swelling and ecchymosis did not advance significantly, as would have been expected in snake bite."

From the study of the hospital course in the Grade II and Grade III cases reported here it is evident that cortisone and corticotropin in the presence of appreciable venenation are incapable of causing the temperature to return to normal, pain to subside, and the general toxic state to disappear. Furthermore, they will not prevent the edema, induration, and ecchymoses from advancing. These authors[1] further noted, however, that in comparison with the clinical course in a series of 11 cases treated without cortisone or corticotropin, swelling was reduced more rapidly in their three patients. This opinion is shared by most of the clinicians whose cases are here reported.

The effectiveness of cortisone and corticotropin in Grade III cases appears in one case to result from blocking of an anaphylactic response to an introduced foreign protein, snake venom; in a second case it helped control a severe angioneurotic edema resulting from the patient's sensitivity to horse serum. The effectiveness of these drugs in Grade II cases is probably related to the remarkable ability of cortisone and corticotropin to inhibit and alter local tissue reactivity to foreign protein and its symptomatic effects on pain and fever[10]. In one case these drugs were credited with saving the patient's life; in all Grade II and Grade III cases of venenation it was a valuable adjunct in therapy.

Summary

Fifteen cases of snake bite poisoning in which cortisone or corticotropin were used as a part of the therapy are here reported. In cases showing the clinical signs and symptoms of moderate to severe venenation there has been a pronounced decrease in morbidity attending the use of these drugs, and they are regarded as valuable adjuvants in the treatment of this type of venenation.

Acknowledgements

In addition to medical records provided by the hospitals mentioned in this report, the authors received summarized clinical impressions from Dr. C. P. L. Burgwyn, Dr. Lloyd F. Moss, and Dr. H. A. Kinser; discharge summaries by Dr. Frank Gonzalez and Dr. S. W. Burwell were provided by Miss Hester E. White, R. R. L. To all of these persons the authors remain indebted.

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Box 2181

The Diagnosis of Diabetes

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THE beginning of treatment for diabetes lies in the diagnosis. Typical symptoms of diabetes associated with much glycosuria are strong evidence of diabetes, but patients can lose weight, feel weak and admit urinary frequency of reasonable amounts and a dry mouth without having diabetes. Joslin's criterion of glycosuria related to food intake and abnormal elevation of the blood sugar remains the most reliable standard for the presence of the disease.

With this in view, we decided to review the records of 100 diabetic patients seen recently. Some interesting facts were noted.

Of the 100 patients, only 10 sought medical care for the classical triad of diabetic symptoms: hunger, thirst and polyuria. Yet 80 more admitted having these symptoms or others often produced by diabetes, such as weight loss, languor, weakness, and nocturnal leg cramps. Either the patient earlier failed to consult his doctor about these symptoms or the doctor failed to make the proper urine test to reveal the presence of the disease. In four cases diabetic coma was present before sugar was found.

In 14 cases sugar was first found by routine examination for insurance, work, or school, or by routine health examination. Of these 14, however, 8 had definite symptoms, and only 5 were persons without symptoms.

Many more cases sought treatment for vulvovaginitis, balanitis, foot infections and other local infections; and 12 cases were found when they were seen for intercurrent disease, including childhood diseases, gallbladder disease and even vaginal bleeding. An occasional case is found because of blurred vision as a result of disturbed water balance.

One is justified in making special tests to disclose diabetes in the fifth and sixth decades, since 41 per cent of this group had the onset between the ages of 41 and 60 years. Yet 15 of the group were children 15 years or less in age, and 4 had the onset after passing the age of 70 years. Of course, the high incidence of diabetes in children in this group may be due to the fact that they are usually the most difficult diabetics to control and my special interest in diabetes would make it likely the more difficult cases would be referred to me. For example:

Case No. 2548 was first seen by me the morning when sugar was first found. The baby was 12 months old and was in diabetic coma with a blood sugar of 1560 mgms., and anuria prevailed. The dehydration was severe and arterial blood had to be examined at times because veins could not be utilized. Fortunately the baby recovered. The pediatrician says there probably will be delay in his diagnosis the next time he sees diabetes in an infant if he has to wait for twenty-five years to see his second case, as he did to see his first. In spite of the fact that diabetes is rare at certain ages, one can make the diagnosis easily if urinalyses are done.

That effort must be made to diagnose the disease earlier in its course is indicated by the duration of diabetes before glycosuria is found. Even then there is often considerable delay in diagnosis and treatment. Glycosuria may be found in the preoperative urinalysis before an emergency appendectomy and yet ignored. I have one patient whose previous hospital record showed glycosuria 9 years before his family doctor found sugar and started him on treatment. 9 years of delay in treatment. In this group of 100 patients the duration of diabetes as judged by the history was as much as twenty years before sugar was found. In 17 cases no definite estimate of such duration could be made. In one 6 year old girl, sugar was found six days after a definite onset of the thirst, and yet many of the older patients had diabetes for many years before its discovery. Seven cases had symptoms of diabetes from 5 to 10 years and 3 cases from 11 to 20 years before sugar was found.

The data thus far presented show that diabetes can exist in apparently healthy people. They show that many people have symptoms of diabetes which are ignored. They reveal that diabetes is often found by routine urinalysis in people suffering from entirely unrelated disease. The sum and substance of these facts indicate clearly the value of examining the urine for sugar in all people who seek our help. The test is simple and cheap. The proof of the significance of the glycosuria was obtained in every case in this group without the aid of a sugar tolerance test. The best time to take the blood for analysis is immediately after the urinalysis shows

*Presented to Virginia Academy of General Practice, Richmond, Virginia, May 5-7, 1954.

sugar. If that be normal, which is a relative rarity in diabetics, a blood sugar sample the following day one hour after a hearty meal with sweets will usually establish the diagnosis. The fasting blood sugar allows many a mild diabetic to escape diagnosis. Certainly the patient should not be put on a diet or given insulin until diabetes is proven except in cases of extreme emergency. In such emergencies the diagnosis should be established within hours. If such simple rules are followed, the undisclosed diabetic will be a rarity in medical practice.

1631 Monument Avenue.

Child's Deafness May Be "Convenient"

Some children may be like older persons who become conveniently "deaf" when they don't want to hear something.

Steven B. Getz, Ph.D., from the California School for the Deaf, Berkeley, said he has seen several children at the clinic who acted as if they had hearing impairments, but tests indicated there was nothing functionally wrong with their hearing. These children had normal speech, and when an examiner stood 15 feet behind them and whispered the names of objects placed before them, the children quickly pointed to the right objects.

One 10-year-old girl, an adopted child, refused to cooperate at home and frequently said "What? What?" at home and in the classroom. But she quickly answered test questions asked in a normal voice. Her trouble was not with hearing but with "general resistance to intrafamily relations." Deafness in this type of case is "best understood as the mechanism whereby the person excludes, at convenient times, verbal communication."

Dr. Getz described the case in the Archives of Otolaryngology, published by the American Medical Association.

Not "All in the Mind."

Internal illnesses resulting from nervous or emotional disturbances are not just "all in the mind." Actually, these illnesses involve nerve channels from the brain to the internal organs, and can possibly be treated by drugs which slow down or stop the nerves' actions. Dr. J. Earl Thomas said in the January 15 Journal of the American Medical Association.

The "dream" of treating such diseases by medicine alone has not been realized. But it is possible to make many symptoms disappear, in a disease such as duodenal ulcer, to "the great relief of the patient." The brain is "an avenue of communication" between external stimuli and internal reactions, and "confusion in the brain is likely to be communicated to the internal organs." Diseases caused by such errors of function are called "psychosomatic." However, any influence the brain has on the body must come through material channels, the nerves. Thus, these mental-emotional disorders do have a physical basis in the nervous system.

"The idea that the viscera [internal organs] are in some way involved in the major emotions is as old as recorded history." Emotions, like other experiences, are responses to stimuli and may react in the same way as ordinary reflexes. Once a response is made, the next time the same stimulus appears the response returns and eventually may come if the stimulus is only suggested, such as by memory or imagination. The nerve chain involved thus becomes a "path of low resistance."

If the pathways are stimulated often enough in the same way, the conscious emotional response and the unconscious internal reaction may become permanently associated. They appear at the same time. This may result even from the appearance of nothing more than the circumstances usually associated with the stimulus. This fact may explain the seasonal or annual recurrence of a disease such as peptic ulcer.

Assuming that some diseases, notably peptic ulcer and ulcerative colitis, are started or become worse because of overactivity of the nerves, interference with the paths of low resistance should prevent illness. Dr. Thomas said this is possible with drugs which depress the particular nerves involved.

Destruction of Laryngeal Cartilages by High Voltage

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Lexington, Virginia

DURING a storm several years ago in Lexington, Virginia, a limb was blown from a tree, breaking a high voltage transmission line. An electrician was sent to repair the break and, with his ladder against the pole, was splicing the wire when there was a flash. He fell and was partially caught by his helper at the foot of the ladder. In the hospital he was irrational. At times quiet, at others he had to be restrained even after large doses of morphine. This mental condition, which lasted several days, was considered to be due to edema of the brain.

On the inner side of the right arm, just above the elbow, and on the side of the chest, at the same location, were third degree burns approximately two inches in diameter. On the left external forearm, just below the elbow, was another third degree burn about one and one-half inches in diameter.

There were two oval burns, one on either side of the midline of the larynx, (Fig. 1, A & B) The tissues were completely destroyed, giving a punched hole appearance down to the thyroid cartilages which presented a translucent pink crystal appearance. The skin margins were slightly charred. The isthmus of tissue between the burned areas sloughed in about three days.

Later, there appeared white areas in the thyroid cartilages. (Fig. 2.) These areas liquefied in a few days, leaving holes through which he breathed. (Fig. 3.)

Then a very interesting thing happened. The granulating tissues which had begun to form grew rapidly in rolls from the soft tissue margins directly toward each opening. Within a short time all these holes were plugged, so that he did not breathe through them. (Fig. 4.) Other granulating tissue gradually spread over the area, covering the remaining cartilages which gradually dissolved and sloughed. A piece of cartilage nearly an inch in diameter, containing the thyroid notch, was removed in one piece.

There was a sagging inward of the laryngeal walls.

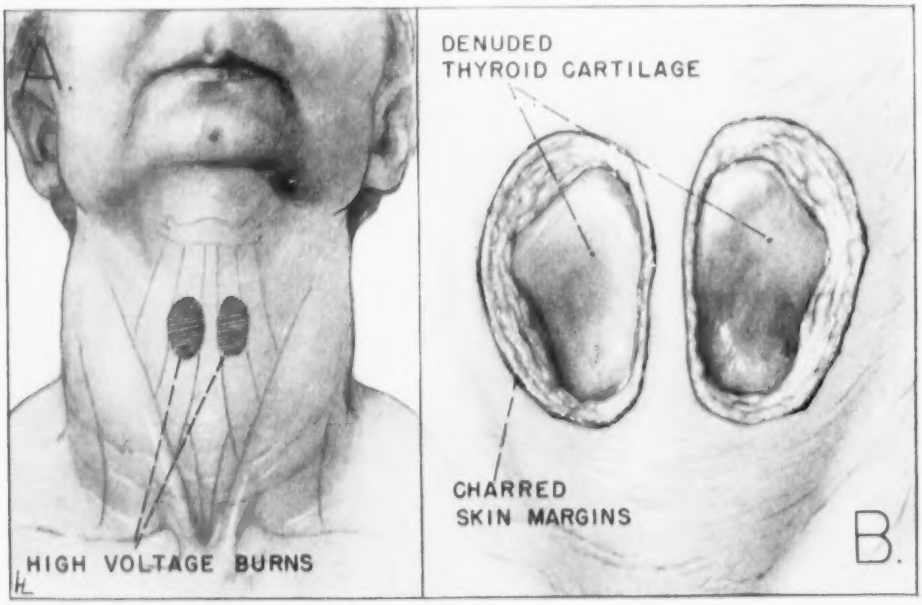

Fig. 1.

Read at the meeting of the Virginia Society of Ophthalmology and Otolaryngology, Old Point Comfort, May 8, 1954.

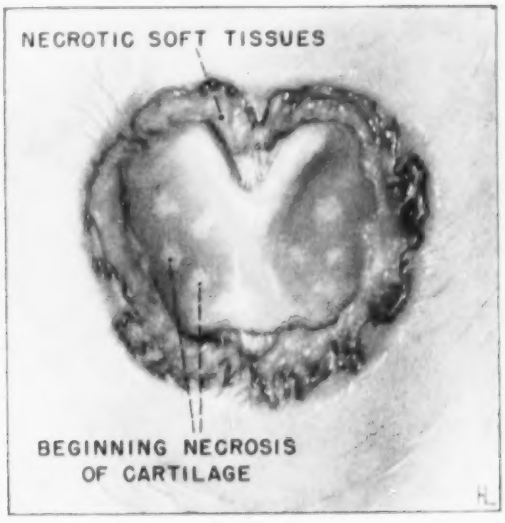

Fig. 2.

Fig. 4.

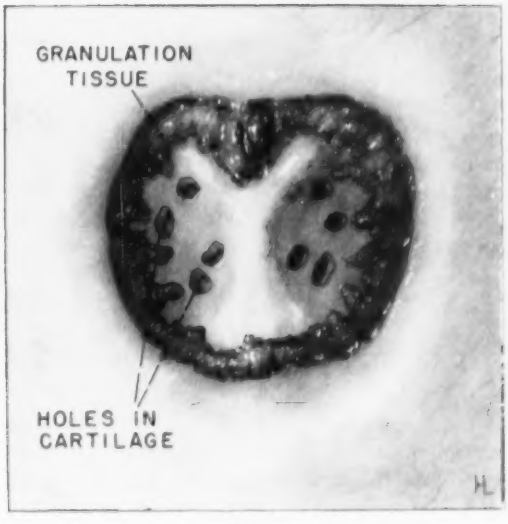

Fig. 3.

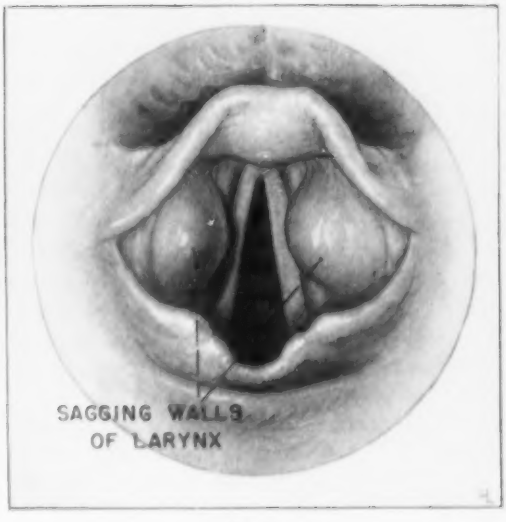

Fig. 5.

(Fig. 5) The voice was husky and the patient constantly cleared his throat. The wound healed finally with considerable scarring. (Fig. 6)

Following two months stay in the hospital, he was X-rayed, with this report: "Practically all the thyroid and aretynoid cartilages have sloughed. A part of the cryoid cartilage has sloughed." Some months later he was X-rayed again with the report: "All the cartilages of the larynx have apparently reformed." At this time the larynx was firm on pressure with the walls sagging inward, as in Fig. 5)

After the first twenty-four hours he answered questions but later said that he had no memory of any happenings during the first week following the accident.

During his hospitalization he frequently complained of severe headaches, pain in elbows, numbness and tingling of the fingers of both hands with the inability of using his hands. These symptoms improved slowly and finally disappeared. Often he was nervous and restless, requiring a sedative. The voice was hoarse for many months and he continued to complain of having to "clear his throat" often, but there was never any difficulty in respiration.

He returned to his duties as linesman at the end of six months.

Fig. 6

New Drug Stops Severe Hiccups.

Unmanageable hiccups lasting as long as nine months have been stopped almost immediately by a new drug. Drs. Charles E. Friedgood and Charles B. Ripstein reported in the January 22 Journal of the American Medical Association that all but four of 50 patients stopped hiccuping when given chlorpromazine (trade name: Thorazine).

While hiccups may be just a nuisance to most people, in some illnesses they "may progress to exhaust the patient's strength and produce marked depression or even death." One of their patients had been hiccuping intermittenly every day for nine months. After five days of continued hiccups, he was brought to the hospital in an exhausted state. After one injection of chlorpromazine the hiccups stopped immediately. Another patient had been hiccuping for nine days, was completely exhausted, and had to be fed intravenously. His hiccups stopped three minutes after taking chlorpromazine.

The physicians said that if the cause of hiccups cannot be treated, hiccuping may return. Five of their patients had hiccups again, but further treatment reduced their intensity and frequency. Four patients did not respond because the cause of hiccups could not be treated.

Chlorpromazine is a "safe and useful" drug for treating unmanageable hiccups not stopped by other methods. The drug has been used previously to aid in anesthesia and sedation, lower body temperature, quiet mental patients, and relieve severe pain and nausea.

Pre-Operative Consultations in Organic Voice Disorders

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ONE of the prime requisites for the successful management of organic voice disorders is an effective cooperative relationship between medical and non-medical specialists. The purpose of this paper is to report the procedure and results of one aspect of such a relationship with particular reference to the management of two types of problems, (a) vocal nodules, and (b) laryngectomy cases.

This report covers in a general sense some of the cooperative activities of the Speech and Hearing Center and the Department of Otology and Otolaryngology of the University of Virginia over a nine year period. The more specific references to individual cases, however, refer to those individuals examined during the past two calendar years.

Vocal Nodule Cases

It is generally agreed that most cases of vocal nodules are a result, in part at least, of some functional mi-use of the vocal mechanism. At the same time, the growths on the vocal folds present an organic aspect to the problem which must be simultaneously considered.

It has been perhaps too often the case that a physician upon discovering the nodules has excised them without consultation of a specialist in speech disorders and, frequently, without even a recommendation for such a referral. We must also assume that speech therapists may have undertaken voice therapy in some nodule cases without previous adequate medical referral. Obviously, neither course of action can be professionally justified. The need for close cooperation becomes even more evident by contrast with such cases where there has been a complete lack of it.

Let us examine, therefore, a few of the reasons why preoperative consultations are important. One of the first advantages of a pre-operative consultation is to alleviate unwarranted fear of the disorder by means of a discussion of the facts of the case and the proposed course of therapy to be followed. Since the post-operative effects of the surgery include a period of silence, followed by a period during which only whispering is permitted, and then, even after the voice may be used, a period during which hoarseness is present and voice training must be instituted, the complete and enthusiastic cooperation of the patient becomes a valuable asset.

During the course of this program a second justification for pre-operative consultations was discovered. It was found that, in cases of comparatively early nodules, vocal retraining alone was sufficient to correct the disorder. Hence, a definitive medical diagnosis together with a thorough analysis of the functional aspects of the case was used to determine whether or not surgery should be undertaken at all, and, if so, at what period of the therapeutic procedure. In our experience, between twenty and twenty-five per cent of the cases responded adequately without surgery, while the remainder appeared to need surgical removal of the nodules prior to the completion of the program of voice therapy in order to achieve satisfactory results.

A third and somewhat more general consideration was studied. It is well know that, in some nodule cases, the exact etiology of the problem is obscure, and many personal and environmental problems may be contributing to the overall impact of the disorder. A discovery and evaluation of the correlative factors appears to be achieved more readily through the cooperative diagnostic approach. To cite just a few examples of the type of problems encountered, one might describe the case of a man who worked in a paper mill as a foreman and whose proximity to loud noise and acid fumes was a major factor in the etiology of the voice disorder. Other cases included individuals who worked in noisy textile mills, and had to shout to be heard during their working hours, as well as still others who were, for one reason or another, chronically in a state of excessive tension. The existence of such problems must be revealed and the correction or alleviation of them is an important part of the overall rehabilitation program.

The effective combination, then, of both medical and nonmedical judgment of the relative effects and importance of the many factors surrounding a voice disorder, such as that produced by vocal nodules, is required for effective translation into therapeutic action. It appears important, then, to establish a close professional relationship between the otolaryngologist and the speech therapist who are willing

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Paper delivered orally in a revised form at the annual meeting of the American Speech and Hearing Association in October, 1954.

Received for publication, November 6, 1954.

and able to work closely and simultaneously, if necessary, with all cases which may have organic aspects. For optimum results, the procedure should include these steps: 1. Medical examination with written report of results. 2. Non-medical (speech) examination and case history, with medical report available. 3. Conference between medical and non-medical specialists, followed by recommendations to patient. Obviously, the key to the success of the procedure is determined by the effectiveness of the third step, and particularly through prior knowledge on the part of the specialists concerned as to exactly what aspects and phases of the problem each will study and treat.

Prospective Laryngectomy Cases

Several additional aspects of the pre-operative consultation procedure may be revealed by an examination of some of the problems encountered in prospective laryngectomy cases. The procedure employed in these cases is somewhat more recent and the method is still subject to some modification and variation. It has been recommended and described in the literature by McCall,[1] Strother,[2] and others.[3] Although the method is similar, it is more difficult to achieve the necessary precision and timing because of the necessity for x-ray and other studies and, of course, the usual urgency for surgery when the presence of a carcinoma has been confirmed.

A significant aspect of this problem is the sometimes violent emotional reaction which obtains, first, when the individual is told that he has a malignancy, and, secondly, when he discovers that he is about to lose what he believes to be his only means of producing the sound needed for speech. It is important that the physician and speech pathologist agree, prior to their interviews with the case, as to what each will tell the patient, and how.

The most obvious, and, in our experience, the most successful, division of labor is to have the physician explain the medical aspects of the problem and reveal the presence of the malignancy. Under some circumstances, the physician may also indicate that the voice will be lost but that it is possible to learn a new way of speaking. More often, however, it becomes the responsibility of the speech specialist to discuss the aspects of the losing of the voice and finding a substitute for it. The most important requirement of this conference is an attitude, on the part of the speech therapist, of confidence that the patient will be able to find the courage and ability to master the new technique. In addition, however, the individual should be shown at least the rudiments of the technique for esophageal speech before losing his true speech if this appears possible and feasible.

In four comparatively recent cases which may be cited as examples, this pre-operative consultation included, in addition to an explanation of the problem involved, from one-half hour to two hours of instruction in the use of the esophageal speech. Two of the cases achieved excellent results during this program and were able to continue with a high level of skill following their surgery and recovery; one achieved partial results in the pre-operative course and maintained this level of ability with only about a one step set-back following his recovery; the fourth case was not able to achieve esophageal speech prior to the surgery during the two hours which were available, and had to start at the beginning of the procedure following his recovery. Of these cases, only the fourth would have to be classed as a failure in therapy since, by the time he had returned home, he had not yet achieved satisfactory esophageal speech.

The number of cases in which actual therapy prior to the laryngectomy has been used are too few in number and the published research too limited to justify any final conclusion. It should be stated, however, that the procedure appears to have promise and justifies further investigation. It would not be fair, however, to make any claim at the moment that this factor alone offers the key to success or failure in the teaching of esophageal speech. It is obvious that there are many other factors involved which may be considerably more significant and important. Furthermore, there are attendant limitations and potential dangers in initiating therapy pre-operatively particularly where unfavorable emotional reactions are present.

Whether or not the pre-operative therapy is performed, however, our experience indicates that pre-operative consultation as a part of the procedure applied to prospective laryngectomy cases may be recommended without reservation. And, in every case, the patient should be referred for speech ther-

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Although the study has not gone far enough for any final conclusions, they already have noted some interesting facts about lung cancer detection.

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There is an "impressive contrast" between detection of curable tuberculosis and curable lung cancer in well-conducted mass surveys. While much curable TB can be found, results are not so good for cancer. Despite emergency action in suspected cancer cases found through official Philadelphia chest x-ray units, surgery could be performed in only 30 per cent of 100 consecutive cases. Since finding cancer while it is still in the operable stage is the only present hope for survival, the researchers said these results made them question the suitability of single x-rays for finding curable cancer.

Their project includes chest x-rays plus examinations and interviews about symptoms and smoking habits every six months. So far they have raised the operability rate from 30 to 46 per cent.

However, referral to hospitals after finding suspicious x-rays or symptoms is still too slow. Seventeen men were operated on out of 37 proved cancer cases, and only 11 survive. The median interval between examination and operation was 55 days for the survivors and 81 days for the six who died.

They said it was important to note that a high proportion of the men studied had some symptoms. The most important were worsening cough and spitting of blood. Others were chest pain, sense of heaviness, weight loss, hoarseness, continued cough, and wheeze.

Important factors in curing lung cancer are detection in the operable stage, promptness in seeking medical attention, adequate and frequent examinations, ability to obtain hospital beds quickly, and surgical skill. Some questions still remain and they hope to answer some of the practical problems through the study.

They also noted that none of the cancer cases found occurred among the 559 nonsmokers included in the survey. However, the number of cancer cases was small and they do not imply "any cause and effect relationship."

The report was made by Drs. Katherine R. Bonser, William Carnahan, David A. Cooper, Donald J. Ottenberg, and Peter A. Theodos, and by Thomas Nealon, Jr., M.C., U.S.N.R.

and able to work closely and simultaneously, if necessary, with all cases which may have organic aspects. For optimum results, the procedure should include these steps: 1. Medical examination with written report of results. 2. Non-medical (speech) examination and case history, with medical report available. 3. Conference between medical and non-medical specialists, followed by recommendations to patient. Obviously, the key to the success of the procedure is determined by the effectiveness of the third step, and particularly through prior knowledge on the part of the specialists concerned as to exactly what aspects and phases of the problem each will study and treat.

Prospective Laryngectomy Cases

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The Medical Society of Virginia . . . .

Report of Delegates to the American Medical Association

The Interim Session of the House of Delegates of the American Medical Association was held at the Hotel McAllister, Miami, Florida, November 29th to December 1st, 1954.

At the opening session several noteworthy addresses were heard. President Walter B. Martin in the course of his remarks declared that "Medicine belongs to the people" and physicians are "merely purveyors" of medical care. Physicians have an obligation to the people that goes beyond their own private practice and into the community. He also emphasized the importance of continued effort to meet the needs of low income and other individuals and groups not eligible for coverage by sickness insurance. National Commander Collins of the American Legion, deploring the conflict between the American Medical Association and the legion over veterans care, urged that the issue be removed from the "area of name calling and propaganda". He proposed a joint legion American Medical Association committee to study the subject dispassionately in the hope of settling at least some of the differences that now exist. This proposal was accepted by the House and later the Board of Trustees named three representatives who will join with a similar number from the legion to compose the committee. Those chosen from the American Medical Association are, Drs. Elmer Hess, President; David Allman, Trustee; and Louise Orr, member of the Council on Medical Service.

Mrs. Oveta Culp Hobby, Secretary of Health, Education and Welfare, presented President Eisenhower's health reinsurance plan, calling attention to the large number of people still not covered by voluntary insurance plans. She held that the reinsurance plan, by which the federal government underwrites losses, is a necessity and that it offers opportunity for self help without subsidy. She was followed by Mr. E. E. Faulkner, an insurance executive who strongly opposed the plan. It is, he said, unnecessary as reinsurance for any sound risk is easily secured from private sources; it would not make uninsurable people insurable, and would inevitably lead to government control of the whole field of health insurance. Judging from the applause following Mr. Faulkner's speech, the House has not changed the position previously taken with regard to government reinsurance.

In a continuing effort to promote and improve medical care, the House approved a 15 member commission, headed by Dr. L. W. Larson, member of the Board of Trustees, to make a comprehensive survey of the various types of plans through which the American people receive medical services. The commission will begin its activities at once and will require at least a year to complete the survey. The subject of Geriatrics received special attention as the House approved a resolution from the Pennsylvania delegation that directs the Board of Trustees to consider the creation of an organization on Geriatrics within the present structure of the American Medical Association. The purpose of such an organization is to make available to local societies, to the profession generally and to the American people such facts and opinions concerning Geriatrics as may be considered of value in meeting and alleviating social and medical problems created by the increasing population of older age groups.

A resolution from the Mississippi State Medical Association requested that the American Medical Association reaffirm its opposition to "Socialized and state subsidized medicine regardless of the form it may assume". Specifically this refers to medical practice by faculty members of tax supported medical schools, a controversial subject in many sections of the country. The reference committee on Medical Education and Hospitals before which the resolution was discussed, recommended that it be referred without approval or disapproval to the Council on Medical Service which is currently studying the various aspects of the subject. This recommendation was approved by the House.

The special committee to study the "relations between Osteopathy and Medicine" has now made final arrangements for visiting and inspecting five of the six existing schools of Osteopathy. It is expected that the committee will, at the June meeting of the House, present its findings concerning the nature, scope and quality of education in these schools.

A special committee on internship, headed by Dr. George Klump, made its report which was favorably received and referred to the Council on Medical Education and Hospitals for further study and

guidance. Among other things, the committee recommended a more thorough canvas of the teaching facilities of a hospital seeking approval for internships and also that any internship program which on two successive years does not obtain one fourth of its stated intern complement be disapproved for intern training. In place of an Indiana resolution protesting certain situations that arise in connection with hospital inspections, the house adopted a substitute that requests the joint commission on accreditation of hospitals to supply a copy of the letter of notification regarding the results of the survey of each hospital, to the hospital administrator, the chief of the professional staff and the chairman of the governing board of the hospital.

Similar resolutions from the Colorado and Mississippi delegates asked that a committee be appointed to study and report on recommended standards for the operation of grievance or mediation committees. This request was approved by the House and the Board of Trustees will appoint such a committee.

Two resolutions and a trustee's supplementary report dealt with the problems and difficulties connected with obtaining satisfactory professional liability insurance. The board reported that a study is in progress, the results of which will be reported to the membership through component societies as soon as possible.

Accepting a recommendation from the council on Constitution and By-laws, the House amended section 7 of Chapter 1 of the Principles of Medical Ethics on the subject of patents and copyrights. The section now provides that a physician may patent surgical instruments, appliances and medicines or copyright publications, methods and procedures. However, the use of such patents or copyrights in a way that retards or inhibits research or restricts the benefits derivable therefrom is unethical. A resolution that would remove from the code of ethics the provision covering the ownership of drug stores and the dispensing of drugs by physicians was rejected.

Several reports and resolutions concerning the "doctor draft law" were received and discussed. A statement of policy was adopted recommending that the law be not extended after June 30, 1955, and that the Council on National Defense continue to study the problem of providing the best possible medical care for the Armed forces. Also that the Department of Defense be requested to give special attention to the further development of a career Medical Corps with adequate compensation.

Named by a special committee of the Board of Trustees, Dr. Karl B. Pace of Greenville, N. C., was selected as the general practitioner of the year and received the medal and citation presented annually for community service by a family doctor.

At the closing session the American Medical Association was awarded a citation from the National Citizens Committee for Educational Television for pioneering to bring educational television to the American public. At the same session, contributions to the American Medical Education foundation of $10,335.00 from the Utah State Medical Society, and $1,000.00 from the Southern Medical Association were announced. Philadelphia was chosen for the Interim meeting in 1957.

J. Morrison Hutcheson, M.D.
Delegate.

Artificial "Pacemaker".

Electrical stimulation on the outside of the chest was used to help maintain a man's heartbeat for seven days. Drs. Albert H. Douglas and William P. Wagner, Jamaica, N. Y., reported the case in the January 29 Journal of the American Medical Association. The 72-year-old patient's heart began to miss beats after numerous attacks of unconsciousness and convulsions. About 18 hours after the attacks started, the man was in a coma and suffering from lack of oxygen in the blood stream. They applied an "artificial pacemaker," and the patient regained consciousness after two hours. During treatment he was able to eat, drink, and perform other functions easily. The pacemaker operates by use of alternating currents from two electrodes placed on the skin of the chest, which stimulate the heartbeat.

Attempts to remove the pacemaker were followed by unconsciousness and imperfect heartbeats, until after seven days they noted several spontaneous beats. The pacemaker was turned off and then removed. Two months later the patient was seen again, walking about, and without symptoms. The only after effects appeared to be some skin irritation where the electrodes had been placed.

Medico-Legal Notes . . . .

Acute Coronary Occlusion as a Compensable Disease

From a survey of litigation cases, it is evident that a continuing flow of cardiac cases is going through the courts.

Most of these are workman's compensation cases following lifting, straining, or unusual exertion in the course of work rather than from direct trauma; and most of them are disasters suffered by persons already afflicted by heart disease.

Hence these cases are the result of what has been called indirect trauma.

Further inspection of the law cases shows that a goodly portion of cardiac claims involve some specific stress or strain out of the ordinary, followed by speedy collapse of the workman. If the subject dies within seconds or minutes thereafter, the cause-effect relationship is more easily established. If, on the other hand, the collapse at work is followed by a period of weeks or months before the appearance of the final injury imputed to be the stimulus, very serious problems of proof exist.

According to Moritz, perhaps the foremost medicolegal authority on the subject, coronary arterial disease is the most common cause of a diminished myocardial reserve.

He also states that a severely diseased heart may be capable of providing an adequate circulation so long as the load placed upon it is not excessive.

The sudden failure of a diseased heart usually occurs independently of any known augmentation in work load and presumably as the result of a spontaneously occurring progression of the disease process, as for example the development of edema or hemorrhage into an atheromatous plaque or the enlargement of an already formed thrombus.

It may also fail because an intolerable work load has been placed upon it and not because of any change in the extent of severity of the disease.

But the sudden onset of heart failure in coronary disease usually occurs spontaneously, and during a period of rest or average activity. In other words, unusual stress or exertion is not a prerequisite to the sudden failure of the diseased heart.

According to Lewis and White, it is generally believed that physiological overwork is incapable of causing injury to a normal heart.

Contributed by: Francis J. Januszeski, M.D., Fellow in Legal Medicine, Medical College of Virginia; Medical Examiner, City of Richmond, Richmond, Virginia.

The 1950 Code of Virginia defines "injury" as follows:

> Unless the context requires, "injury" and "personal injury" mean only injury by accident or occupational disease as hereinafter defined, arising out of and in the course of the employment and do not include a disease in any form except when it results naturally and unavoidably from either of the foregoing causes.

The court has said that the possibility of a relationship between an injury and the disablement is not enough. Mere exertion which is not greater than that ordinarily incident to the employment but which combines with pre-existing disease to produce disability is not compensable as an "accidental injury".

But the court does liberally construe the term, "accident", so that extraordinary physical stress or strain, or nervous shock, *not normally* incident to the employment, is considered to be an "accidental" cause of any resultant injury.

While we have been dealing mainly with indirect trauma thus far, we must also take into consideration direct trauma. Direct trauma, as used here, refers to heavy impact injuries to the overlying intact thorax. Direct trauma over the heart causing coronary thrombosis is not a reasonable attribution unless there is positive evidence that the segment of the vessel containing the thrombus was in the region of injury. Moreover the character of the thrombus should correspond with the duration of the interval between injury and death (Moritz).

Reports of myocardial anoxia due to trauma are rare in literature. There has been one such death among the twenty-one thousand recorded during the past three years by the Medical Examiners in the State of Virginia.

In conclusion, in any case appearing before a doctor in which there is evidence of myocardial anoxia and a history of injury, he must consider all the above named possibilities.

He must also keep in mind that the court has said repeatedly, "The Workman's Compensation Act was adopted for the benefit of the employees and their dependents; that it should be liberally construed in order to accomplish this human purpose. But liberal construction does not mean that the act should be converted into a form of health insurance."

Notes On Pulmonary Tuberculosis . . . .

Modern Therapy VIII
Can Tuberculosis Really be Cured?
Factors Which Influence Termination of Treatment (A)

Today the public is being informed *on every hand* that "tuberculosis is curable", a sentiment with which the Virginia State Health Department is entirely in accord. Increasing knowledge about tuberculosis *as a disease*, combined with modern available treatment potential, leaves little doubt but that patients with active pulmonary tuberculosis can be *clinically cured* in ever increasing numbers, and that more and more of these will be restored *completely* to their respective pre-illness levels of living.

Whenever a disease is accepted as curable, a definite *time limit* for specific therapy is implied. Most people do not regard as "curable" any disease that requires treatment for the balance of their lives, however grateful they may be for long periods of symptomatic relief, associated in many instances, with increased life span, produced by perennial therapy.

Clinical Cure Defined. Clinical cure as applied to pulmonary tuberculosis is, of course, *not* synonymous with "pathological cure", contingent as the latter would be, in important part, upon liquidation of the last Tubercle Bacillus from within the body, in each instance. Nor does clinical cure mean that a patient can "burn the candle at both ends". He cannot, for example, lead two lives safely, *at the same time*, for an extended period. Many ex-patients discovered this to their sorrow during World War II by attempting to work *both* the "swing" and the "graveyard" shifts in industrial plants operating around the clock. Generally, such lives are not considered "normal".

Most ex-patients will gladly settle for "recovery" as defined by an ability to lead a perfectly normal life (like millions of other people), with negligible risk of relapse, without need for exercising any precautions whatever to prevent spread of infection, and with no formal rest periods or other specific antituberculosis therapy prescribed or taken.

If a man, the former patient can plan to earn a living in an occupation identical to that which supports thousands of healthy normal families; he can marry and raise a family. If a woman, she can bear children; her home life will be virtually indistinguishable from that of other housewives.

In moderation, both can do *practically* everything their friends do, even "dissipate" occasionally—and finally die of old age, or of some condition other than tuberculosis. The autopsy might show a few encapsulated caseous nodules containing viable Tubercle Bacilli—but who cares?

This is surely a *practical* goal worthy of great effort and much sacrifice to attain. The potentially curable patient should be encouraged to strive for nothing less.

However, even today unfortunately, it must be acknowledged that not all curable cases can be restored wholly to their pre-illness physical status. Advanced disease too often leaves in its wake varying degrees of partial permanent disability; the patient must adjust his post-illness level of living to correspond.

It has been suggested (see October issue, Virginia Medical Monthly) that, *for practical purposes*, formal rest periods, as well as other restrictions placed upon pre-illness life patterns, might best be looked upon by the general practitioner, as prescribed in tuberculosis, for one of three reasons: (1) Ultimate clinical cure (complete); (2) Long term "control" (of clinical or subclinically active disease); (3) to compensate for partial *permanent* disability (*resulting from* tuberculosis).

The simple way, perhaps—indeed, the *key*—that would enable one to differentiate between what may be regarded as "treatment" for active tuberculosis and what can be accepted as "compensation" for partial permanent disability resulting therefrom, would be to ascertain *the intent* with which each is prescribed by the attending physician. By analogy, the only way one could possibly establish whether a leg-brace was being worn for "treatment" or for "disability" would be to determine the circumstances relating to its application. As is well known, an *identical* brace could be prescribed for *either* reason—or initially could have been applied for completely curative purposes, but—*failing that*—was later retained to compensate for what eventually proved to be a permanent weakness.

When a tuberculous patient is advised to acquire a less strenuous occupation by which to earn a living, when a professional skater is told he must *never*

*Prepared by the Virginia State Health Department

perform professionally again (but otherwise may lead the same life he did before his illness); when a patient is instructed to take ten hours sleep each night (instead of a pre-illness eight) *for the balance of his life*—at that point—it would appear that his physician has acknowledged (to himself, at least) that *complete* restoration to a pre-illness level of physical status is not likely and/or is not medically feasible, *even after* all evidence of clinically active disease has, or shall have, disappeared, and after due allowance has been made for the healing of residual sub-clinically active disease. *At that point*, what had formerly been but a part (indeed, may still be a part) of the patient's treatment regime, is formally cut-marked, *in perpetuity*, as compensation for partial *permanent* disability.

This over-all approach or "working hypothesis" has the advantage of making possible a clean-cut distinction between what is therapy for tuberculosis and what is not therapy, in the ordinary sense of the word. It is consistent with and supports the contention that, by and large, "tuberculosis is curable"—that the adage "once a tubercular—always a tubercular" need not apply at all to ever increasing number of patients—either from the standpoint of seeming endlessness of "treatment" as such, or from the standpoint of an ever-present *real* danger of relapse. This would apply whether the patient, upon recovery, can return almost literally to his pre-illness level of living, or whether he cannot do so, *provided*, in the latter instance, he adheres closely to his prescribed post-illness standard of living imposed by his partial permanent disability.

Considered from this point of view, need for such vague and poorly defined terms as "preventive treatment" would seem to be abolished, for in the absence of clinical or sub-clinically active disease, or an anticipated excessive exposure to super-imposed exogenous re-infection, there would really be nothing to "prevent", in the usual sense that *this* term is used in medicine.

A *patient* can readily understand why advanced pulmonary tuberculosis, upon healing, might confer a partial permanent disability—even though the disease itself is curable in that no clinical or sub-clinically active disease (requiring treatment) remains. It might be more difficult to reconcile a need for *perennial* "treatment" for a disease which is "really curable" (with or without sequelae)—since the word "cure" implies that the disease is truly inactive—*no longer in need of treatment* "preventive" or otherwise. (see September and October issues, Virginia Medical Monthly). Use of the *term* "treatment" past that point can only add confusion and uncertainty to a field already sufficiently complex as to justify every reasonable effort to simplify and clarify elementary concepts in the interests of clearer thinking.

Factors Which Influence Termination of Treatment. Systemic rest regimes of curable tuberculous patients, treated successfully during the clinical phase of their disease, are punctuated by periodic decrements in the amount of rest prescribed during this phase whether or not the patient is the recipient of collateral therapy. According to conventional practice, this pattern is usually followed throughout the remainder of the patient's treatment "career", or until such time as systemic rest periods, prescribed with therapeutic intent, are discontinued altogether, and the patient returns to his pre-illness, or prescribed post-illness, standard of living.

Unfortunately, during the period between total disappearance of all tangible evidence of active disease, and complete restoration to normal living, or restoration to whatever modified life pattern may have been selected to compensate for partial permanent disability, there are no criteria by which to judge when lesser amounts of *rest* may safely be prescribed. There is no way to follow the course of sub-clinically active disease, for the patient is already symptom free; physical examination shows no indication of active disease; the x-ray has previously reached a point where persisting lung shadows, if any, have been declared to be "compatible with a healed lesion"; and such laboratory tests as have been made, are negative—no Tubercle Bacilli found.

Accordingly, analysis of treatment needs during the *sub-clinical* phase must be based upon what is *already known* about the original or maximal *extent*, the total *duration*, and the observed *course* of the disease, during its *clinical* phase, in each individual patient:

(1) *Extent and Intensity of clinical disease at time of diagnosis* (or at its height).

How sick was the patient? The tuberculous individual who was *twice* as sick initially, as his neighbor, would exemplify a factor which in and of itself (everything else being equal) would tend to prolong the total period of treatment for the ensuing sub-clinical phase. This conclusion is based upon the seemingly legitimate assumption that the *impact* of the disease upon his system would naturally have been greater than it would have been upon another who

had had only *half* as much involvement (provided all other circumstances were comparable). A person who has been extremely ill from influenza is usually not permitted to get up and about as soon, following abatement of symptoms, as is the patient who has suffered a much lighter attack.

(2) *Duration of Clinical Disease.*

How long has the patient been sick? A patient who has had even minimal tuberculosis for *two years* (instead of two months) can naturally be expected to require a much longer period to heal *thoroughly* residual subclinically active disease. *Chronically established* infections of all types are notoriously more difficult to eliminate *completely* than are those more recently acquired (syphilis, malaria, amoebiasis, etc.). While no attempt is made to completely eliminate infection in treatment of tuberculosis, the same principle could apply to the *relative* difficulty to be anticipated in achieving *lasting clinical cure* in the person who has already had the disease *for a long time*. This circumstance, therefore, would, in and of itself, appear to call for an extension of the total duration of treatment directed expressly at the sub-clinical component. When the patient has exceptionally good native resistance, as he usually does when the disease is not extensive but of long duration, the temptation, of course, is to be satisfied with "control", by treating each successive exacerbation or "flare-up" (*clinical* reactivation) as it occurs. Unfortunately, each needless exacerbation, often mislabelled "relapse", provides another statistic to help "prove" that tuberculosis is a "chronic relapsing disease".

(3) *Course of the Disease Under Treatment*

How did the disease respond to treatment? Time wasted on catch-as-catch-can therapy sheds *comparatively* little light upon the patient's real capacity to heal tuberculosis *completely*, although it must be conceded that the degree to which a patient has demonstrated an ability to resist rapid deterioration under unfavorable conditions does provide a rough measure of his inborn resistance to the disease. Unfortunately, haphazard or inadequate treatment always adds to the total *length of time* the patient has been sick, and would be accounted for under the heading of *Duration* (see above).

Once *proper* treatment was instituted, did the patient's symptoms whether mild or severe subside rapidly or slowly? Did objective physical and x-ray evidence of activity disappear (regardless of the total lung *area* involved) in a few months or did it take a year or more? *How long* was required to convert his sputum (from "positive" to "negative")? Whether or not unduly long drawn out, was his clinical improvement uniformly smooth or was it characterized by one or more acute or semi-acute complicating episodes, such as pleurisy with effusion?

Since one is dealing with the *same* patient for the *same* disease throughout its sub-clinical as well as clinical phase, it would appear reasonable to suppose that, if the clinical course was "stormy", the sub-clinical course might be correspondingly "hectic", were it susceptible of objective demonstration; at least this might well be acted upon as though it were an established fact when planning a treatment program for the sub-clinical phase of active disease.

In order that the importance of adequate treatment for sub-clinically active tuberculosis may not be overlooked or underestimated, it is suggested that the general practitioner regard this often neglected field as a distinct entity—*in its own right*—for which treatment should be *specifically* prescribed, the same as for clinically demonstrable active disease. *When this is done*, appropriate interest upon the part of all will automatically be concentrated upon the *immediate* post-clinical period where there has long been a tendency to liberalize rest schedules *too* radically *too* soon—a trend that has proven extremely costly to many patients.

Operation PR Action

The ABCs of medical public relations are neatly spelled out in AMA's new "County Medical Public Relations Manual." Prepared by the Department of Public Relations as a working manual for county medical societies, this booklet comprises the first comprehensive textbook on medical PR. The Manual explains how to organize for PR action, outlining dozens of PR projects which local medical societies can conduct to win the respect and confidence of the community. State medical societies have received a supply of Manuals for distribution to county PR leaders.

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

Operating Farms at the Mental Hospitals in Virginia

The business of farming, in the Department of Mental Hygiene and Hospitals, is as old as the oldest institution. The State of Virginia has used sound judgment and has, as a policy, purchased quite large tracts of land adjacent to the various institutions. Since this land is owned by the State, it follows that the most practical and economical way to properly maintain and improve the land is through a well planned farm operation. Most of the institutions have added land to the original grant for the institution. Little, if any, of this land was purchased purely for the purpose of farming. Rather it was purchased for self-protection, to keep the normal growth of towns, industrial areas, etc., from encircling the institution and preventing expansion of the institution. But regardless of why or how the land was obtained, it has been in the past and is now advisable for the State to make practical use of it. It is obvious that the upkeep connected with the land would be a burdensome expense unless some income can be realized from farm commodities.

Thus we see that a farm seems to go hand in hand with the normal institutional set-up. We find this true in all of the states in the United States, as well as Virginia. There are, of course, many other reasons as to the why of farms in connection with mental institutions, some of which will be mentioned briefly in this discussion.

Location and Extent

There are six farms that are operated as a part of the hospitals and training schools which they serve. Excluding the land for campus buildings and grounds, but including all other, these farms have a total acreage of 6,580. Of this amount, approximately 3,720 acres are used for crops and pasture. The farms are located as follows: Eastern State Hospital, Williamsburg; Central State Hospital for colored, Petersburg; Western State Hospital, Staunton; Southwestern State Hospital, Marion; Lynchburg Training School and Hospital, Lynchburg; and Petersburg Training School and Hospital for colored, Petersburg. In addition, the Department has an undeveloped tract of land, consisting of 2,500 acres, in Henrico County. Some of the utilities have already been completed on this tract and an institution for colored mental defectives will be developed as money is made available. As has been the practice at other institutions, it is felt that a portion of this land will be developed for farming.

The following figures from the Annual Report of the State Hospital Board for the year ending June 30, 1953, indicate the extent of the combined operation of the six farms:

1. Gross income, $552,245.53 — of this amount $405,026.27 was credited as food consumed by patients. The remainder of the gross was as feed produced and products sold for cash.
2. Net profit for the year was $60,317.00.

Some Considerations

The State Hospital Board and Dr. Joseph E. Barrett, Commissioner of the Department of Mental Hygiene and Hospitals, are among those who see many advantages of having a farm connected with each mental institution. Although it is true there are many advantages that we all see, at the present time we, basically speaking, use only the economic factor as a justification for operating farms. This is perhaps as it should be, but there is a danger in this attitude as the farms should also be operated for the best interest of the patients. Those who are in charge of farm operaions must never become so "dollar" conscious that they lose sight of the fact that the farm exists only for the service it can render the institution whose primary purpose is the care of mental patients. Using this point of view we, who are charged with details of farm management, seek to operate the farms using wise management practices so long as these practices do not interfere with that which is best for the patients, though some difficulties do occur, for example, milking hours are not always spaced properly due to inconvenience it causes patients who work in the dairy. Another good example is found in using toxic materials to poison insects. Many times we back off from recommended materials when we think the well-being of patients

Article prepared by Paul S. Keyes, Farm Co-ordinator, Department of Mental Hygiene and Hospitals.

is in danger. In view of the relationship which an institutional farm has to patients, we are, of course, proud that we do show a profit, but we are more concerned about the overall service the farm renders the institution than we are the cold dollar and cents profit angle.

In any discussion of institutional farms, the question of therapeutic values of farm work must receive attention. Though not being an authority on this subject, certain facts have been obtained from observation in that physicians and others familiar with the treatment of mental patients do not doubt the value of farm work as a therapeutic aid even though only a limited number of patients can work on a farm. As modern machinery increases, the number of patients that can be properly used decreases. These considerations are, of course, unfavorable to the farm as a therapeutic aid. In the face of these facts, however, the six farms in the department regularly do their part in the field of therapy for approximately 150 patients each work day during the year. Most of these patients enjoy farm work and many of them show displeasure, in no uncertain manner, if they are prevented from going to the farm to work.

Plan of Operation

With one exception, each farm operates under a farm manager, who is in charge of the entire operation and is directly responsible to the Superintendent or the Steward of the institution. The exception noted above will eventually be on the same basis. All farms are actively engaged in a soil conservation program under supervision of the local Soil Conservation Supervisor in the respective communities. Farm managers regularly consult their County Agricultural Agent concerning all phases of farm operation. In addition, the managers, herdsmen, and other employees attend short courses at Virginia Polytechnic Institute and area schools put on by specialists from the Agricultural Extension Division of the School of Agriculture at Virginia Polytechnic Institute.

All persons in this Department, who concern themselves with operating farms, feel that it is wise and proper to keep the farms in close touch with the State College of Agriculture and its various agencies. If we keep abreast of the latest and best proven methods recommended by our State Agricultural College, who can doubt that we will be successful? We realize that these farms are operated in the interest of every citizen of the Commonwealth. If we stick closely to proven methods recommended by our own College, we doubt that any citizen can be justly critical. We do not infer these farms should be experimental or even a proving ground for experimental work, but rather they should be up to the minute in using worthwhile practices that have been proven by experimental work. By so doing, we do not expect to eliminate all mistakes, but we contend that this is the road of least error. The same is true as applies to the Virginia Department of Agriculture. Here is another State Department that has many branches and many employees that are able and willing to help farmers solve various problems.

It is a pleasure to report that all plans are complete for the first School for Institutional Farm Workers in Virginia. This school is to be put on by Extension Specialists from Virginia Polytechnic Institute and will be held on March 15th at Charlottesville.

The largest and most important enterprise on the several farms is dairying. All farms have a dairy, with the exception of Central State Hospital Farm at Petersburg. The milk produced comes entirely from Holstein Cows and is as good as the best. All milk is pasteurized and delivered in bulk to the point of consumption. All dairies are regularly inspected by a representative of the Dairy and Foods Division of the Virginia Department of Agriculture. The cows, buildings, and equipment meet specifications for grade A milk.

All herds, with one exception, use artificial insemination. The exception is the small herd at Petersburg Training School and Hospital where, at the present time, an inseminator is not available.

All herds are on the recommended disease control program including calfhood vaccination for bangs, and regular testing for bangs and T. B.

Three of the herds are purebred, one herd is purebred and grade, and one herd is made up entirely of grade animals. The aim is to eventually have all animals purebred, but there is no inclination to dispose of any grade animal as long as she is a good producer.

Swine ranks second in order of importance. As in the case of milk, the quality of pork produced is excellent. All farms produce pork and garbage is used as the principle feed. Our plan of improvement is based on careful selection of purebred boars and using them on the best sows in the herd. Control of internal parasites is the biggest problem we have at present. We are making some progress toward satisfactory control of internal parasites on three of the farms and one farm already has an excellent control program.

Other enterprises produced for food are vegetables, beef and poultry. These enterprises are large on some of the farms but do not make a large percent of the aggregate income. Vegetable production is important at Eastern State and Central State; poultry is produced only at Central State; while Southwestern State is the only large producer of beef. The quality of eggs, poultry and beef is excellent. Our vegetables are as good as any ungraded vegetables, and are priced as "Farm Produced Ungraded".

Generally speaking, products are priced considerably below the prevailing market. Milk is a good example; we get $.55 per gallon for grade A Pasteurized milk delivered in bulk. The market price at present for the same product is above $.80 per gallon.

Farms in our Department are regularly turning in products that have a gross value of over $550,000.00. This figure can be increased if prices remain the same, but the present figure is a sizable business that justifies careful study and planning. We can point with pride to the overall service the farms have rendered in the past. There are improvements needed now and the future will uncover more. Our job and our goal is to recognize the needs and to use all available means to satisfy them as soon as possible. To this end, we are dedicated.

Ordinary Baldness Can't Be Cured.

The first known written medical record contained a remedy for baldness, including fat from the lion, hippopotamus, crocodile, goose, serpent, and ibex. It had one thing in common with modern "cures." It also failed to cure baldness.

One of the reasons baldness "cures" have continued to appear for thousands of years is that baldness is a "mysterious condition about which people can be easily fooled," according to Veronica L. Conley, assistant secretary of the American Medical Association Committee on Cosmetics. Another reason is that it is the kind of problem that breeds quackery, she said in the January Today's Health magazine, published by the A.M.A. The "pseudo-scientific arguments supporting most baldness cures" are frequently "so convincing that their unsound basis can be detected only by trained scientists." For instance, "before and after" pictures of bald men whose hair grew again after using a "restorer" are among "the most potent advertising weapons."

The trouble is that in many types of baldness, hair will return regardless of treatment or lack of it. This type of baldness and "spontaneous regrowth" often follows infectious diseases accompanied by fever, including erysipelas, pneumonia, typhoid, and influenza. Serious hair loss sometimes follows childbirth or surgery. In all these conditions, normal hair growth returns without help. But for ordinary baldness, massage and hair tonics with or without vitamins, hormones, ultraviolet light, diets, sulfa drugs, and antiseptics have "no special place" in treatment. A complete physical examination to discover a possible cause in disease is wise. Regular and gentle scalp massage, brushing, and intermittent tugging at the hair to lift the scalp are "measures for good scalp hygiene." However, once ordinary baldness gets under way, "it is progressive and permanent and there is no known way of preventing or retarding its progress." The tendency toward baldness is hereditary but will appear only where there is a normal amount of male hormone.

Scientists are mostly optimistic about an eventual solution to the problem of baldness, except for one factor.

"In the course of evolution there has been a marked reduction in the amount of hair covering the human body." "The loss of scalp hair may be part of an evolutionary trend. If this is true, future centuries will bring not a cure but the appearance of more and more bald men."

Public Health . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Measles

It is inevitable that every individual will be exposed to measles. With modern methods of travel and with isolated spots in the world no longer found, it is unlikely that conditions will again exist that prevailed in the Faroe Island in 1846. Measles had disappeared from these Island in 1781 and there had been freedom from the disease for 65 years. In 1846, an individual who had been in contact with a case of measles a few days before leaving Copenhagen, landed on the Islands and several days later, the fourteenth after exposure, developed the disease. An epidemic resulted, during which a number of observations were made:

The period of incubation is usually 13 to 14 days.

All ages are susceptible.

One attack produces immunity.

This disease may be transmitted during the prodromal period and before the appearance of the rash, but is most readily transmitted at the time of development of the eruption.

In the epidemic on the Faroe Islands there were people alive who had had measles 65 or more years previously; not one of these was attacked the second time. Although second attacks have been reported, they are extremely rare.

Measles is prevalent in greatest numbers in the late winter and early spring months and is at its lowest level during the late summer months. Peaks or epidemics may be expected every two to three years. As people have the disease they enter the immune group and the number in the susceptible group falls. The increase in the immunes acts as a damper to further spread. The build-up of the susceptible group then goes on by the admission of susceptibles moving into the area and being born into the group and another peak or epidemic results.

An infant has an immunity from infection during the first few months of life that is acquired from its mother, provided she has had measles.

Because of the inevitability of exposure it is not desirable to prevent measles except in those under three years of age or in children whose poor health makes them bad risks for any infectious disease. Preventive measures are directed to the reduction of the frequency of complications and of death. Such measures are available through the administration of convalescent serum or of gamma globulin.

Following an attack of measles the blood of the patient is rich in immune bodies that are able to neutralize the virus of measles, and convalescent serum obtained between the 10th and 30th days is most effective. Five cc. of convalescent serum for a child and 10 cc. for an adult, if given intramuscularly by the fifth day after exposure, will usually protect the patient for about three weeks. If given between the fifth and eighth days of exposure, the serum will modify the disease rather than protect against it. Modification prolongs the incubation period to 17 or 18 days and reduces the severity of the attack.

In recent years the production of gamma globulin from blood collected from donors all over the country has afforded a new approach to the prevention and modification of measles. The gamma globulin is purified and concentrated, and the antibodies against measles are present in a vastly greater concentration than in the original plasma. A dose of 0.1 cc. of gamma globulin per pound of body weight will usually prevent infection with measles when given promptly (within four or five days) after exposure. For modification, a dose of 0.02 cc. per pound of body weight will modify the severity of the disease if given within four or five days after exposure. It is emphasized that modification is desirable for healthy children over three years of age. If too greatly modified it is questionable whether the protection resulting is durable.

Attention is called to the fact that some gamma globulin is labeled "Immune Serum Globulin (Human)" and some "Poliomyelitis Immune Globulin (Human)." While all of it is effective in measles, only that which is labeled "Poliomyelitis Immune Globulin (Human)" has been tested for its efficacy in the prevention of poliomyelitis.

During an epidemic it is not advisable to close schools or discontinue classes. "The Control of Communicable Diseases in Man" calls for the "daily observation of children and of other possibly exposed persons, by a physician or nurse. This observation should include a record of the body temperature. A non-immune exposed individual exhibiting a rise

of temperature of 0.5° C. (0.9° F.) or more, should be promptly isolated pending diagnosis." A non-immune person presenting symptoms of coryza or cold should likewise be isolated pending diagnosis.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	January 1955	January 1954
Brucellosis	0	0
Diphtheria	2	7
Infec. Hepatitis	162	506
Measles	353	969
Meningococcal Infections	7	14
Poliomyelitis	0	3
Rocky Mt. Spotted Fever	1	0
Streptococcal Infections (Including scarlet fever)	755	610
Tularemia	1	11
Typhoid Fever	4	3
Rabies (In animals)	61	30

Air Tour to Europe.

Final arrangements for the A.M.A. pre-convention and post-convention tours to Europe this June have been consummated by United Air Lines.

These air tours are sponsored by the American Medical Association and operated by United Air Lines in conjunction with Thomas Cook & Son, and have been arranged to precede and follow the annual meeting at Atlantic City, June 6-10. Physicians and their wives have a choice of four itineraries, each of four weeks' duration.

Departures from New York are scheduled for May 6, May 8, June 11, and June 13. Deluxe air service will be provided by Air France, British Overseas, K.L.M., Royal Dutch, Pan American, Sabena Belgium, Scandinavian Airlines and Swiss Airlines.

Those departing on May 6 will return to New York on June 3. Those departing on May 8 will return June 5. Both groups will be back on the East Coast in time to attend the Atlantic City meeting. The post-convention tours will depart on June 11, returning July 9 . . . and June 13, returning on July 11. The same itinerary is included in all tours. The countries visited are: England, France, Italy, Switzerland, the Netherlands, and Germany.

In addition to sojourns in capital cities and renowned "old world resorts," the tours will include medical meetings in London, Paris, and Zurich, at which time European scientists will lecture. Concurrent with these medical meetings, style shows will be presented in these cities and in Rome for the physicians' wives who will be on the tour. Among the cities to be visited on the tours are: London, Amsterdam, Haarlem, The Hague, Coblenz, Frankfurt, Zurich, Lucerne, Milan, Venice, Florence, Rome, Genoa, Monte Carlo, Grasse, Nice, and Paris. Continental transportation will be on the surface in motor coaches, a Rhine steamer, gondolas, and the luxurious "Blue Train" between Nice and Paris.

The cost of the tour has been reduced to $1,598, which includes round trip transportation, all enroute meals, and hotel accommodations. A deposit of $100 is required at the time of booking. Requests for booking and additional information should be addressed to American Medical Association Convention Tours, United Air Lines, 5959 S. Cicero Avenue, Chicago 38. Checks should be made payable to United Air Lines.

Woman's Auxiliary . . .

President Mrs. Maynard Emlaw, Richmond
President-Elect Mrs. Mervin W. Glover, Arlington
Recording Secretary Mrs. J. W. Carney, Newport News
Corresponding Secretary
Mrs. Levi W. Hulles, Jr., Richmond
Treasurer Mrs. William C. Barr, Richmond
Publication Chairman Mrs. Wm. S. Grizzard, Petersburg

State Health Week

March 21-27, 1955 has been set as the week during which the public is to be informed of the available community health resources, and our National Auxiliary Public Relations Chairman, Mrs. R. M. Reynolds, of Norfolk, has suggested that all auxiliaries in the forty-eight states, the District of Columbia, and the territories of Alaska and Hawaii use this week as a time to inform their own communities of these free health services.

To this end, your President, your State Public Relations Chairman, Mrs. Eugene Grether; the President-Elect, Mrs. M. W. Glover; the National Public Relations Chairman, Mrs. Reynolds; and Dr. Charles L. Outland, the Chairman of our Advisory Council, called on Governor Thomas B. Stanley on January 20, 1955, to request him to add important significance to our project by making a proclamation or issuing a statement naming March 21-27 as STATE HEALTH WEEK. This he has done as illustrated in his signed statement shown here.

Mrs. Grether, our State Public Relations Chairman, has coordinated a program for observance enlisting the cooperation of the Virginia Junior Chamber of Commerce, the Virginia Council on Health and Medical Care, the Virginia Division of Safety and State Highways, the Virginia Congress of Parent-Teacher Associations, the Virginia Graduate Nurses Association, the Virginia Health & Accident Association, as well as the volunteer health agencies in the State.

County Auxiliary presidents and PR chairmen have received detailed instructions from Mrs. Grether and are asked to plan now to make State Health Week an outstanding success. All plans are to be cleared through the local medical societies and their help should be sought in making this a combined Medical Society-Auxiliary project, if possible. Free diabetic detection clinics and TB chest x-rays are among the suggestions which might be considered.

Posters advertising the week as State Health Week should be placed in local store windows and a poster contest in this connection might be planned in the local schools.

This is our opportunity to render a real public service, and the enthusiastic response of our members will insure its success.

LUCIA K. EMLAW
(Mrs. Maynard R. Emlaw) *President*

STATE HEALTH WEEK

The Commonwealth of Virginia for many years has benefited from the earnest endeavors of those of its citizens who are engaged in the promotion of good health for all.

These citizens have labored long and faithfully in healing the sick, in defining the sources of disease, in research for the development of new healing aids, and in informing the general public of the value and means of obtaining better health through happier lives.

It is desirable that the general public become better acquainted with the various community health services existing and proposed.

I take pleasure, therefore, in designating the period March twenty-first through March twenty-seventh, 1955, as STATE HEALTH WEEK in recognition of the valuable service rendered by those engaged in promoting the health of our citizens, and invite the people of Virginia to take this occasion to inform themselves on the great variety of health activities that are being conducted in their behalf.

THOS. B. STANLEY
Governor of Virginia

Old Belt Auxiliary.

We welcome into the Auxiliary family, the Woman's Auxiliary to the Old Belt Medical Society which was organized on January 18, 1955, in South Hill, with the assistance of Mrs. William C. Barr, our State Treasurer. The organization meeting, following a delightful dinner meeting of the doctors and their wives, was held in the dining room of the new Community Hospital.

The new officers elected and installed are: President, Mrs. Robert D. Keeling, South Hill; Vice-President, Mrs. Earl M. Bane, Lawrenceville; Recording Secretary, Mrs. Edward J. Kiember, Alberta; Corresponding Secretary-Treasurer, Mrs. James Northington, South Hill.

Doctor Wilkins A. Ozlin, of South Hill, is Adviser from the Medical Society. The following were appointed to a committee to draw up bylaws for the Auxiliary: Mrs. Wilkins A. Ozlin, chairman; Mrs. Lucius Bracey and Mrs. Thomas A. Saunders, all of South Hill.

The counties covered by this Auxiliary are Lunenburg, Mecklenburg, and Brunswick. We anticipate with pleasure the opportunity of becoming better acquainted with the doctor's wives in this area and pledge to them the willing assistance of all of our officers and chairmen at any time.

L.K.E.

Petersburg.

The Petersburg Medical Auxiliary held their regular monthly meeting on January 31st at the Petersburg General Hospital.

Mrs. Herman Barber, Ways and Means Chairman, announced that the auxiliary will hold a dinner dance at the Country Club on February 26th. Members of her committee are Mrs. William Grossman, Mrs. Julius Hopkins, Mrs. Kirby Hart, and Mrs. William Grizzard. The money raised will be given to the Nursing Scholarship Fund which was established this year.

Mrs. Norman F. Wyatt, chairman of the Nurses' Education Committee, announced that she had completed plans for panel discussions in the junior and senior high schools. Interested students will learn about student nurse life, advantages of the profession, etc., and will also learn how to apply for the nursing scholarship.

Mrs. Joseph McCormick, President, announced that she had endorsed a five hundred dollar government bond over to the hospital as a gift from the auxiliary.

Dr. and Mrs. Milton Ende have a second son, Mark, born in January.

Mrs. John Uzmann
Publication Chairman

Richmond.

The Richmond Auxiliary held their regular meeting on January 21st. Mrs. Maynard Emlaw, State President, and Mrs. M. W. Glover, President-Elect, were honored guests. Mrs. William H. Cox was chairman of the day and Mrs. R. C. Siersema was luncheon chairman.

Mrs. Emlaw spoke about the trip she and Dr. Emlaw took last summer and of their visit with a Belgian doctor. It was most informative and interesting.

Mrs. George H. Snead
Publicity Chairman

Arlington.

The Arlington Auxiliary is very busy with plans for their luncheon fashion show to be held on March 8th. The show is to raise money to complete payment for the call-board the auxiliary gave the hospital last year. Mrs. Albert J. Orlosky is general chairman and Mrs. H. L. Bastien, Mrs. L. G. Gant and Mrs. R. V. Mitchell are the other members of the committee.

Mrs. J. R. McGriff, Today's Health Chairman, has been invited to speak at the Arlington County Medical Society meeting in February. She hopes to encourage more subscriptions to this excellent magazine.

Mrs. John Waters
Publication Chairman

Mrs. Seward.

It is with sorrow that we announce the passing of one of our esteemed members-at-large, Mrs. Blanton P. Seward, Roanoke, who died on December 17th, after an illness of twelve months, the last eight of which were in the hospital. We extend to Dr. Seward the very sincere sympathy of us all.

President's Message . . . .

Public Relations

I RECENTLY had the pleasure and privilege of reading the book of minutes of the ladies organization which established the King's Daughter's Hospital in Staunton about sixty years ago. The struggle these gallant women had to raise a few thousand dollars to buy and open that hospital is in marked contrast to the large sums recently obtained to build and open the present wonderful building. The patient cost at first was about two dollars a day, and the ladies were able to contribute one dollar a day for charity patients. The chief (and probably the only) nurse was paid twenty-five dollars a month, but her salary soon was raised to thirty-five dollars to meet competition for her services.

The gradual growth and expansion of that hospital to its present state is typical of the development of medical facilities made necessary by the rapid accumulation of medical knowledge. Medicine in those early days of the hospital was a very inexact science. It is still so classified but the development of diagnostic aids and specific drugs has made it much more exact.

All business and manufacturing concerns have similarly developed, and as they expanded, the need for maintaining good relations with the public became evident so that now large sums of money are spent by high salaried executives to keep these relations good.

In the old days the doctor had to know his patient well, it was necessary for him to observe everything about the patient because he had little or no laboratory aid. The same doctor delivered the babies, prescribed for the family, occasionally removed some offending organ, and was in general the advisor in adversity. When he rendered a small bill annually for a multitude of services the family was grateful and "public relations" was no problem.

Today when a patient with a complicated illness is sent from one specialist to another after having numerous laboratory procedures, x-ray examinations, et cetera, it is natural that he becomes bewildered and his pocketbook depleted especially if he has to lose some organ to the surgeon in a hospital magnificently equipped but very expensive. The increasing need for explanation to the public is well illustrated by the increase of the budget for the Public Relations Department of the A. M. A. from $102,116 in 1950 to $325,045 in 1955. We should review this progress of misunderstanding and mounting cost in the light of the old-time doctor and remember that the field of the best propaganda of public relations is in every contact between patient and physician. We should not pass them on like an automobile on the assembly line, but each and everyone involved in the complicated care of a sick person should make that patient know that he is interested in him and not only in his heart lesion or his gall stones. That relationship properly handled offers the best opportunity for good public relationship and it costs no more now than it did sixty years ago.

Carrington Williams

President

Editorial . . . .

Current Medical Legislation

AT THE beginning of last year, when President Eisenhower sent his opening message to the 83rd Congress he said: "The State of the Union is good." Then the President proceeded to tell Congress of all the changes he wanted, to make it better. I think we might start our discussion on a similarly optimistic basis. Fundamentally, the relationship between the Federal government and the medical profession is good—but it is good in a qualified sense.

I will not labor the point known to you all, that the profession has been criticized in Washington. I will not burden you with details of the innumerable Federal laws and regulations past or pending which reflect the critical attitude.

The first basic observation I would like to make is that the problems facing the physicians today are to some extent of their own making. First, because American physicians have done too good a job of selling their services and a very poor job of selling themselves. Second, because they did not anticipate in a positive sort of way the need for doing some of the things which government insists on doing for the masses today.

Let us take up that first point. Like a tired, bashful, forgotten cook peeking out of the hot kitchen of Medical Science, the physician sees his services enjoyed and raved about the world over as the prime reason for America's superlatively high standard of living and health. But he rarely hears a spontaneous word of praise. That is all taken for granted. We have educated the American public to the view that they deserve nothing but the best. As a result, medical science and professional integrity are best remembered when the service happens to fall a little short of the best. Then come the brickbats. During the last 50 years, American medicine has transformed a shortlived, fearful population, living in relatively insanitary conditions, into a nation of good-natured, incurable optimists, and healthy families and individuals who take miracles as a matter of course. They become suspicious and critical only when somebody says that they cannot have everything they want. Too often they are told they should have all the medical care in the world at no cost to themselves.

Naturally this mass psychology of expecting miracles as a matter of course is made to order for the politician whose stock in trade is glib promises. In the campaign oratory, we have heard many speeches promising this and that for the voters, and the welfare state certainly got a shot in the arm. The voters themselves need a little intellectual resistance to these campaign promises. Although government by its very nature can neither produce wealth nor operate our professions effectively, it has seized the spotlight and the public eye as the dispenser of all social blessings. It taxes individuals and businesses to expend public funds, and government spends public funds to extend its control over business and individuals. One might paraphrase the Gospel without irreverance by saying: "The government giveth and the government taketh away. Blessed be the name of the government." Or, "the state is my shepherd, I shall not want."

Obviously, I cannot go into detail and give you even a summary of all of the activities in the field of medical legislation during the 83rd Congress which adjourned in August, but I do want to highlight what I feel are the more important bills and tell you what happened to them. In all, this Congress had before it 16,470 bills and resolutions. Of this number, there were 407 with enough medical implications for the AMA Washington Office to report in its publications. The AMA Committee on

Legislation took action on 197 of these bills, and the Board of Trustees went along generally with the Committee and placed the Association on record one way or the other.

I think it can be safely said that with the adjournment of this Congress, the medical profession no longer found itself ranked as an amateur in legislative matters. The American Medical Association has come a long way I think in improving its relationships with the Congress and federal agencies. It seems that finally we are being called upon by some of the federal agencies to supply our viewpoints on certain aspects of medical practice. Chairman Wolverton of the House Interstate and Foreign Commerce Committee has asked us if we would sit down with members of his staff during the Fall to try to come up with a new version of the reinsurance bill for the next Congress. However, he has not yet called on us. The U. S. State Department has asked for advice and assistance in helping plan amendments to existing regulations which would provide medical and hospital care for the dependents of foreign service personnel. One counsel has been asked also in drawing up regulations concerning the federal civilian employee, voluntary health insurance program that will be presented to the next Congress. And Dr. Frank Berry, the Assistant Secretary of Defense for health and medical matters, has called us in to help in some phases of the intern residency problem.

The American Medical Association two years ago pledged cooperation to all federal agencies and a closer and more friendly relationship has been established.

The most controversial and most widely publicized health legislation before the Congress was the reinsurance bill. The American Medical Association after many conferences and specially called meetings of the Board, and after getting the reactions of many industry and life insurance company representatives, went on record as favoring the major objectives stated in the bill. But the AMA determined that the bill as written would not reach these objectives. As a matter of fact, the measure would in all probability interfere with the normal growth of the very groups the bill seeks to encourage—voluntary prepayment health insurance plans. The House Interstate and Foreign Commerce Committee held extensive hearings on this bill and reported it favorably to the floor. The reaction on the part of individual physicians and state medical societies and other groups against its passage was so great the House recommitted the bill to the Committee. The Senate also held rather extensive hearings, but following the House action, President Eisenhower, frankly concerned over the bill's fate, introduced Mrs. Hobby before a nationwide TV hookup for the purpose of selling reinsurance. I think that perhaps the President is not aware that the Department of Health, Education, and Welfare has not cooperated with the American Medical Association. I am hopeful at this time that this Department will begin to consider the views of the physicians of this country a little bit more seriously.

Last year, the doctor draft law was extended for two years, to expire June 30th of next year. This doctor draft act was also amended this year to make it possible for the armed services to utilize the services of a physician or dentist as a private without having to commission him. Incidentally, this legislation came about as a result of the Major Peress case and was the trigger mechanism for the Army-McCarthy hearings.

A bill was passed prohibiting the interstate shipment of fireworks into a state prohibiting their sale. The Hill-Burton Hospital Construction Act was expanded and extended during this Congress and now has an appropriation for $21 million plus $75 million for the regular program. The law was amended to include chronic disease hospitals, diagnostic and treatment centers, nursing homes and rehabilitation centers.

In my opinion, this extension of the Hill-Burton law is easily the most important piece of medical legislation enacted since Congress passed the original Hill-Burton law about eight years ago. That law, as you know, provides for federal grants to local communities to help in constructing hospitals. The federal government has nothing

to do with administering the hospital once it is built. But that was—and is—for complete hospitals, or general hospitals. For example, grants could not be made to clinics and health centers, or to nursing homes, unless they were a part of a hospital that could itself qualify for a grant. Thus, in the view of the hospital people, the country was getting a lot of hospitals where care is expensive, but not enough clinics, health centers, and nursing homes. Also, although they were eligible for grants, not many chronic disease hospitals were being built. As you know, it is possible to give many types of chronic cases all the care they need in a chronic disease hospital, and at less cost.

If the states and local communities really go to work and plan and dig up their share of the costs, this new Hill-Burton act should result in the next three years in the construction of perhaps a quarter of a billion dollars worth of new facilities. Meanwhile, the regular Hill-Burton program is moving right ahead; the $75 million voted for this year is about what it has been receiving in the past.

I want to mention that the AMA supported this expansion bill, as it supported the original Hill-Burton act eight years ago.

The Hoover Commission, which is studying the Executive Branch with a view of bringing about more efficiency, was authorized and is now at work with a good Medical Task Force. The Indian Hospitals, which for many years have been in the Department of the Interior, were transferred to the Department of Health, Education, and Welfare with the U. S. Public Health Service responsible for administration. The Commission on Intergovernmental Relations, formerly known as the Manion Commission, is now in the process of studying fiscal relationships between various levels of government. The new tax revision law has some features of interest to physicians, primarily the one liberalizing tax deductions of medical expense.

The National Fund for Medical Education has been in existence for some time and has felt the need for a federal charter. This Congress, with the help of the American Medical Association, was able to get this bill through and it has now been signed into law. So the national fund with which the American Medical Education Foundation cooperates is now operating under a federal or Congressional charter.

A new bill allowing physicians to leave instructions with the pharmacist over the telephone for the dispensing of certain narcotic drugs, particularly codeine, has been signed by the President. The change has the support of the pharmaceutical industry and the AMA.

The Jenkins-Keogh bill for private pension plans for the self-employed unfortunately got nowhere in this Congress. A bill providing public health service grants-in-aid to the states for expanding, extending, and improving public health services on local, regional and state levels passed the House and hearings were held by the Senate Labor Committee, but this bill, too, failed to become law. The AMA testified on the measure and suggested certain perfecting amendments.

During the 83rd Congress, there was a flood of bills extending presumption of service connection for many diseases. If the trend of this type of legislation continues, all diseases will be service-connected and the Veterans Administration will be operating a multi-billion dollar medical program. One bill extending the presumption of service connection for tuberculosis to 3 years passed the first session of this Congress and was signed. Two other service presumption bills were reported favorably by the House Veterans Affairs Committee, but were stopped in the House Rules Committee.

Extension of the Social Security Act to more people and an increase in benefits have been major planks in the platforms of both political parties for some years. The American Medical Association has not taken a position on the philosophy of Social Security. However, there have been two provisions of the Act to which the AMA has

paid a lot of attention. One of these is the compulsory coverage of physicians. We opposed this, believing instead that physicians should be granted the privilege of providing for their own retirement incomes through the Jenkins-Keogh Bill. The Social Security Act as signed into Public Law does not include physicians or dentists in its coverage.

Another provision of the social security law which attracted widespread attention was the so-called "waiver of premium" section for permanent and total disability. It is true that this section has been amended and made somewhat more palatable than a similar provision in H. R. 7800 in the 82nd Congress. However, it still is a section which should not have been passed. One bad feature is that it could require a more or less mandatory rehabilitation at the state level before a disabled worker could qualify for "freeze" benefits. We have proposed instead that an employee's best five or ten years be used to arrive at approximately the same benefit; this would not involve the medical profession in physical examinations at the direction of the federal government.

The 83rd Congress also voted extension and improvement of the vocational rehabilitation laws. The AMA took no position on this bill but offered no opposition to it. This new program—again if the states are willing to step up their activity—should result in more than tripling the number of persons rehabilitated annually.

The legislative picture would not be complete without mention of several pieces of legislation the Administration introduced last session, but made no effort to push toward enactment.

Probably most significant is the plan to improve and make more uniform the system of giving medical care to civilian dependents of military personnel. As you know, if you've had any experience with the military, there is no overall system for providing medical care for the wives, the children and the other dependents of the men in uniform.

That isn't the only confusing part. The cost of caring for dependents has never been entered in the budgets of the armed forces as one item. Indeed, budget bureau officials complain that it is completely impossible to trace down these costs.

There is no argument about one thing: the present system should be changed. What care is given should be uniform, both among the three services and geographically. After many conferences with people from the AMA and from other organizations, the Defense Department late in the session introduced what is known as the administration's plan for straightening out the dependent medical care problem. It provides that the services would care for all the dependents they could. Dependents would go to civilian physicians and to civilian hospitals only when there were no military beds or uniformed physicians to care for them.

In this dependents care problem we disagree with the administration on one major point. The Department and the military services, as I said, want the uniformed physicians and the service hospitals to take care of all the dependents they can accommodate. We think that's wrong. We think the dependents should get their medical care the same place other civilians get theirs—that is, at private hospitals and from private physicians. I don't know whether the Department eventually will see it our way. If it does not, we are likely to collide head-on with the services on this one. It is a fundamental issue.

This bill was not pressed last session, but there is no question about what will happen next year. The Defense Department will attempt to have the bill enacted.

It thus may be seen that the American Medical Association was definitely in favor of the objectives of the President's health program and that it supported and gave technical assistance to the huge majority of it. There were more health measures enacted into law at this Congress than in any Congress in history, to our knowledge.

Mr. Eisenhower, meanwhile, has informed the people that he will push in the next Congress those parts of his program which he did not get in the last Congress. Accordingly, we can all look forward to a revival of, *one*, the administration's reinsurance proposal, *two*, dependent medical care for military personnel, and *three*, health insurance for all civilian federal employees at home and abroad.

I think I would be giving you a false sense of tranquility if I did not mention one other field that generally is not considered legislative, but that nevertheless is an important congressional activity.

I refer to the total share of the federal budget spent on health and medical programs—the total, and all the small bits and pieces that make up the total. The total grows from year to year, and it doesn't seem to make much difference which party is in control. Now I am not saying that is wrong—I am merely saying that it is something the physicians of the country—and particularly of this section—should observe carefully.

During this fiscal year the federal government expects to spend a little more than two billion, one hundred million dollars on all national health programs, ranging from huge, costly hospitals to plant clinics run by one nurse. We are calloused to billions of dollars, so I'll put it this way:

The total is eight per cent more than was spent for the same purpose last year.

If you drop out national security costs, the total represents 16 per cent of the entire federal budget.

The two-billion dollars being spent by the federal government this fiscal year on health and medical programs is almost four times the total budget for the Department of the Interior; it is more than six times the total budget for the Department of Labor; it is eight times the budget of the Department of State.

I will give you one other comparison. The Department of Commerce estimates that this year the American public will spend a total of 12 billion dollars for all health costs, from research to toothpaste. And the federal government will pay out one sixth of this total.

In closing, I want to leave with you the thought that the American Medical Association is not mad at anyone in Washington. We think that in general the objectives of the present administration are worthy objectives. And we know that what goes on in Washington—in the agencies as well as in Congress—deserves a lot of watching. That is what we in the Washington Office of the AMA are attempting to do for you.

FRANK E. WILSON, M.D.

EDITOR'S NOTE—Dr. Wilson is Director of the Washington Office of the American Medical Association. This article was presented at the 1st Interstate Scientific Assembly, Washington, D. C., October 31-November 3, 1954.

Society Proceedings . . . .

Halifax County Medical Society.

Officers for this Society for 1955 are: President, Dr. W. J. Hagood, Clover; vice-president, Dr. W. D. R. Driscoll, South Boston; and secretary-treasurer, Dr. George E. Chappell, Halifax.

Bedford County Medical Society.

At the last meeting of 1954 held at the new Bedford County Memorial Hospital, Dr. W. G. Hardy was elected president, to succeed Dr. J. G. Jantz. Other officers are: Dr. W. V. Rucker, vice president; and Dr. Dennis Robinson, secretary-treasurer.

The Tazewell County Medical Society

Met on December 15th at The River Jack Restaurant, North Tazewell. Dr. W. A. Laqüeur, pathologist at St. Luke's Hospital, Bluefield, W. Va., spoke on Liver Diseases and Methods of Diagnosis.

The following officers were elected to assume office January 1955: President, Dr. W. T. Henderson, Richlands; vice-president, Dr. C. H. Goodykoontz, Bishop; secretary-treasurer, Dr. Mary Elizabeth Johnston, Tazewell (re-elected).

Accomac County Medical Society.

Officers for this Society for 1955 are Dr. William C. Fritz, Onancock, president; Dr. Walter A. Eskridge, Parksley, vice-president; and Dr. James C. Doughty, Onancock, re-elected secretary-treasurer for the sixteenth consecutive year.

Richmond Academy of Medicine.

The Section on the History of Medicine of the Academy held its annual meeting on February 8th. Dr. Owsei Temkin, Association Professor of the History of Medicine, Institute of the History of Medicine, Johns Hopkins University, spoke on "Art, Anatomy and Learning in the Renaissance."

A Virginia Military Institute diploma, signed by General Stonewall Jackson when he was professor of natural history there, was presented to the Academy of Medicine. The diploma was issued in 1857 to the late Dr. John H. Cameron of Bath and Rockbridge Counties. Other diplomas of Dr. Cameron's, which were presented at the same time, included one from the Societe de Cadets at VMI and one from the Medical College of Virginia.

Officers of the Section, elected at this meeting, are Chairman, Dr. Edward Holmes; vice-chairman, Dr. Hunter H. McGuire; and secretary, Dr. William Johns.

News . . . .

Calendar of Coming Events

AERO MEDICAL ASSOCIATION.—Hotel Statler, Washington, D. C., March 20-23.

INTERNATIONAL ACADEMY OF PROCTOLOGY.—The Plaza Hotel, New York City, March 23-26.

SOUTHEASTERN ALLERGY ASSOCIATION.—Orange Court Hotel, Orlando, Florida, March 25-26.

EASTERN STATES EDUCATION CONFERENCES.—New York Academy of Medicine, New York City, April 21-22.

INDUSTRIAL HEALTH CONFERENCE.—Memorial Auditorium, Buffalo, New York, April 25-29.

VIRGINIA SOCIETY OF OPHTHALMOLOGY & OTOLARYNGOLOGY.—Natural Bridge, Va., May 6-7.

VIRGINIA ACADEMY OF GENERAL PRACTICE.—Hotel Chamberlin, Old Point, Va., May 13-15.

Dr. Herbert C. Jones

Has been named president of the 1955 Petersburg Community Chest. He has been a leader in its activities for a number of years and is beginning his third term on the board of directors.

Dr. L. Benjamin Sheppard

Has been named president of the Richmond Rotary Club.

Attention Physician Pilots.

Some time ago several physicians simultaneously conceived the idea of forming a national society of flying physicians. Initial action was started by Mr. Mark E. DeGroff of Tulsa, Oklahoma, medical equipment manufacturer, who offered to act as a central office until preliminary arrangements could be made. A notice in the AOPA Newsletter brought forth over one hundred interested inquiries. About twenty eight physician pilots attended the American College of Surgeons Meeting in Atlantic City and twenty four attended the AMA session in Miami. It was felt that enough interest was shown to warrant an attempt to organize.

It was decided that the purposes of this society should be scientific, educational, and social. Physicians have a considerable influence which should be passed on to everyone to promote greater aviation safety. Further, physicians who have this interest

could learn much about the technical aspects of flying from association with each other.

The immediate objectives are: compilation of a complete list of physician pilots; appointment of temporary local area chairmen, the collection of ideas and suggestions; and encourage physicians to fly in to the AMA Meeting at Atlantic City, June 6-10, 1955.

A scientific and social program can be arranged at Atlantic City if enough interest is shown.

Will physician pilots who are interested please send their names, plane flown and landing field to the local chairman of their area, or, if not known, to H. D. Ankers, M. D., 25 Jackson Street, Little Falls, New York, temporary chairman.

Richmond EENT Society.

Officers of this Society are Dr. Julius C. Hulcher, president, and Dr. Charles N. Romaine, secretary. They meet the first Tuesday of January, March, May and October at the Commonwealth Club.

Dr. C. C. Hatfield

Was recently installed as one of the directors of the Saltville Kiwanis Club.

Dr. Howard Masters,

Richmond, was one of two Virginia men recently named to the college of electors of the Hall of Fame for Great Americans.

State Board of Medical Examiners.

Dr. K. D. Graves, Secretary-Treasurer of the Virginia Board of Medical Examiners, reports that the following were licensed by the Board at its meeting and the examinations December 9th to 11th, inclusive, 1954:

By Examination:

Dr. Paul Henry Boivi, New York, N. Y.
Dr. George John Chobany, Williamsburg
Dr. Nourollah Norman Cohen, St. Albans, N. Y.
Dr. Vernon Bert Dettor, Stone Harbor, N. Y.
Dr. Joao Gustavo dos Santos, Richmond
Dr. Eva V. S. Flun, New York, N. Y.
Dr. Dirk Enthoven, Richmond
Dr. Sixto Fernando Guiang, Jr., Pittsburg, Pa.
Dr. Helen Margaret Hackman, Stockton, Calif.
Dr. Zoltan Halmai, Raleigh, N. C.
Dr. James Stanley Hens, Washington, D. C.
Dr. Cornelia Hoch-Liget, Charlottesville
Dr. Harold W. Kimmerling, Richmond
Dr. Pierre-Aymar Lechaux, Washington, D. C.
Dr. Richard Lehmann, Richlands
Dr. Houshang Moghtader, Rego Park, N. Y.
Dr. Hernando Munoz, Norfolk
Dr. Simon Paloch, Alexandria
Dr. Carl Sheldrick Plumb, Roanoke
Dr. Samuel B. Rentsch, Jr., Richmond
Dr. Irene Elizabeth Roeckel, Washington, D. C.
Dr. Henry Wade Stinson, Silver Spring, Md.
Dr. George John Vareska, Norfolk
Dr. Gerald Theodore Zwiren, Norfolk

By Endorsement:

Dr. John Powell Anderson, Waynesboro
Dr. James Claire Andrews, Charlottesville
Dr. Joseph L. Atchison, Springfield
Dr. Marie Frances Ayres, Falls Church
Dr. Bruce Lawrence Baer, Chapel Hill, N. C.
Dr. Harold L. Beddoe, Richmond
Dr. Kenneth Hubert Bailey, Radford
Dr. Lee Arndell Barnes, Franklin
Dr. Ardwin H. Barsanti, Falls Church
Dr. James S. Berger, Norfolk
Dr. Max E. Bertholt, Roanoke
Dr. John Bernard Birch, Abingdon
Dr. Robert Guy Blackwelder, Marion
Dr. Lemuel Bowden, New York, N. Y.
Dr. George C. Branche, Jr., Richmond
Dr. James Crawford Bruce, Alexandria
Dr. John Daniel Bunce, Arlington
Dr. William Wilson S. Butler, III, Roanoke
Dr. Robert E. Byrne, Arlington
Dr. James Richard Chambers, Alexandria
Dr. Jonathan Otis Cole, Washington, D. C.
Dr. Charles David Cooper, Alexandria
Dr. George A. Comrie, Washington, D. C.
Dr. Joseph Wentworth Coxe, III, Richmond
Dr. John Angelo Dattoli, Arlington
Dr. LeFarle B. Drake, Warrenton
Dr. Byron Thomas Eberly, Norfolk
Dr. Merle Weaver Eshelman, Harrisonburg
Dr. Robert J. Faulconer, Norfolk
Dr. Robert Joel Fink, Chevy Chase, Md.
Dr. John Orland Ford, Wytheville
Dr. Israel Frieman, Richmond
Dr. Robert Conrad Fraasa, Buena Vista
Dr. Aaron Harry Gerber, Washington, D. C.
Dr. Everett J. Gordon, Washington, D. C.
Dr. Samuel H. Gould, Hopewell
Dr. Leonard Harris, Newark, N. J.
Dr. Martin A. Hoffman, Richmond
Dr. Francis Gregg Horne, Hampton
Dr. Benjamin F. Huntley, III, Durham, N. C.
Dr. Leo Ernest Johns, Jr., Norfolk
Dr. John Franklin Jonas, Clifton Forge
Dr. Joseph Foster Kell, Jr., Richmond
Dr. Elizabeth A. Koppel, Washington, D. C.
Dr. James Harold Lee, Jr., Wilmington, Del.
Dr. David Levine, Millenbeck
Dr. Bernard G. Levy, Springfield
Dr. Jean Douglas Lockhart, Alexandria
Dr. Joseph C. MacPhail, Portsmouth
Dr. Harry S. McGaughey, Jr., Charlottesville
Dr. John Robert McGreevy, Arlington
Dr. Howard Otis Mott, Arlington
Dr. William H. Moller, Jr., Charlottesville
Dr. William Robert Parks, Harlan, Ky.
Dr. Philip Young Paterson, Charlottesville
Dr. Joseph Cosgrove Peck, Galax
Dr. Joseph A. Provenzano, Annandale

Dr. Herbert P. Ramsey, Washington, D. C.
Dr. Manley Whitfield Rankin, Jr., Eagle Rock
Dr. Charles Loren Ransom, Danville
Dr. Leonard J. Raviz, Shaker Heights, Ohio
Dr. Marvin F. Sherrill, Portsmouth
Dr. Charles Glenn Smith, Falls Church
Dr. Bertram C. Snyder, Arlington
Dr. Mitchell Alden Spyker, Richmond
Dr. Raymond Stoller, Silver Spring, Md.
Dr. Walter J. Walker, Jr., Dublin
Dr. James Richard Wennemark, Radford
Dr. Louis Howard Williams, Newport News

Homeopathy
Dr. John A. Swartwout, Falls Church

Osteopathy
Dr. Brewster Edgar Topping, Arlington

Dr. Chester D. Bradley,

Newport News, delivered a paper at the International Congress of the History of Medicine in Rome, Italy, in September. His subject was "Docteur Craven et la vie de prison de Jefferson Davis."

Gill Memorial Spring Congress.

The Twenty-Eighth Annual Spring Congress of the Gill Memorial Eye, Ear and Throat Hospital, Roanoke, will be held April 4-9. The program includes topics on ophthalmology, otology, rhinology, laryngoscopy, facio-maxillary surgery, bronchoscopy and esophagoscopy. Guest members of the faculty are: Drs. Henry L. Birge, Hartford, Connecticut; Paul Boeder, Southbridge, Massachusetts; William B. Clark, New Orleans; Dan M. Gordon, New York; Anderson C. Hilding, Duluth, Minnesota; Chevalier L. Jackson, Philadelphia; Bertha S. Klein, Chicago; Walter E. Loch, Baltimore; E. G. Martens, Rochester, Minnesota; Daniel S. Miller, Boston; Daniel Ogle, Washington; Thomas Patte, Birmingham; R. Townley Paton, New York; James Purnell, New York; Albert D. Ruedemann, Detroit; Robert E. Ryan, St. Louis; Richard Schmieder, Ann Arbor; John Sheldon, Ann Arbor; G. Edward Tremble, Montreal, Canada; and Grant Ward, Baltimore.

Full information may be obtained from the Hospital, Box 1789, Roanoke, Virginia.

Richmond Academy of General Practice.

At the meeting of the Academy on January 18th Dr. F. Elliott Oglesby was installed as president, succeeding Dr. W. Linwood Ball. Other officers are: president-elect, Dr. Charles G. Young; vice-president, Dr. Richard Crossen; secretary, Dr. Charles L. Williams; and treasurer, Dr. Wayne C. Campbell. Drs. Reuben F. Simms and R. S. Faris are new directors.

Dr. Thomas Nelson Page Johns,

Richmond, was guest speaker at the February 2nd meeting of the Medical-Surgical Staff of the Northampton-Accomac Memorial Hospital, Nassawadox. His subject was "Problems of Chest Surgery" and was part of a program of Continuation Education through the Medical College of Virginia.

Annual Postgraduate Institute.

The Philadelphia County Medical Society will hold its 19th Annual Postgraduate Institute at the Bellevue-Stratford Hotel, March 29-April 1. Among the subjects to be covered are: Treatment of Hypertension; Undesirable Side Effects of Certain Drugs; Deformities in Children and Adults; Coronary Artery Disease; Advances in Roentgenological Diagnosis and Treatment; Emotional Implications of Aging; Diseases of the Eye; and Infertility.

For further information contact the Director of the Institute, Dr. Leandro M. Tocantins, 301 S. 21st Street, Philadelphia 3.

Richmond Doctors on Program.

Drs. Guy W. Horsley and Daniel D. Talley, III, were among the speakers at the Southeastern Surgical Congress' silver anniversary assembly in Atlanta, February 21-24. Dr. Horsley spoke on Diagnosis and Management of Peptic Ulcer and Dr. Daniel on Modern X-Ray Aspects of Gastric Ulcer.

Symposium on Tumors.

The first annual symposium on tumors, conducted by the Tumor Clinics of the Jefferson, Lewis-Gale and Memorial and Crippled Children's Hospitals of Roanoke, was held on February 3rd. The meeting was attended by 130 physicians and 15 of the key cancer lay workers of the area. Dr. Michael B. Shimkin, Chief of Biometry and Epidemiology Branch of the National Cancer Institute, was moderator for the panel discussions which were on the subjects of Malignancies of the Skin, Malignancies of the Uterus, and Malignancies of the Stomach. A color movie, prepared by the American Cancer Society on "Cancer, A Research Story" was shown. Mr. Bernard W. Woodall, Executive Director, Virginia Division, American Cancer Society, gave a discussion of Tumor Clinics.

Those participating in the symposia were: Drs. James C. Gale, William H. Kaufman, William L. Sibley, Charles D. Smith, W. W. S. Butler, III, James B. Hutcheson, A. P. Jones, John A. Martin, Walter S. Johnson, H. Rowland Pearsall, Daniel Leavitt, and James G. Snead.

Tenth District Council.

On January 27th, the Tenth District Council met at the residence of Dr. H. C. Bates, Jr., Councilor. Representatives present included Drs. Charles Amole and Milton Stein from Alexandria, Drs. Robert Hunt and Robert Rounds from Fairfax County, and Drs. J. R. B. Hutchinson and Henry Bastien from Arlington County. A general discussion was held on ways and means of increasing cooperation and effectiveness of the three component societies. Plans were formulated to hold a joint meeting in the near future. This is hoped that this meeting can be partly social, to promote friendliness among the local physicians, and partly instructive, to bring out some important medical problems faced by the entire district.

Virginia Urological Society.

Officers elected at the annual meeting of this Society, held during the First Interstate Scientific Assembly in Washington, are: President, Dr. C. J. Devine, Norfolk; vice-president, Dr. Hugh Warren, Charlottesville; and secretary-treasurer, Dr. William Russell Jones, Richmond.

Post-Graduate Day Program in Roanoke.

The Staff of the Memorial and Crippled Children's Hospital, Roanoke, Virginia, will hold its Sixth Annual Post-Graduate Day Program Wednesday, March 23, 1955 at the Hotel Roanoke. Registration begins at 1:00 P.M. and the afternoon program is as follows:

Surgery of Mitral Valvular Disease—Dr. Lewis H. Bosher, Jr., Medical College of Virginia.

Surgical Timing and Prognosis of Congenital Heart Disease—Dr. J. Francis Dammann, Jr., University of Virginia.

Clinical-Pathological Conference—Clinician: Dr. Proctor Harvey, Georgetown University; Pathologist: Dr. James C. Gale, Memorial and Crippled Children's Hospital.

Panel Discussion: Problems in Pre- and Post-Operative Care—Dr. Proctor Harvey, Georgetown University, Moderator; Dr. Lewis H. Bosher, Jr., Medical College of Virginia; Dr. J. Francis Dammann, Jr., University of Virginia; Dr. Elliot V. Newman, Vanderbilt University.

Following the afternoon session, there will be a social hour and banquet and an after-dinner lecture as follows:

The Basic Mechanism and Clinical Classification of Heart Failure—Dr. Elliot V. Newman, Vanderbilt University.

Duke Hospital Poison Control Center.

Duke Hospital has established a Poison Control Center to serve as an information bureau and to offer treatment to victims of poisoning. By calling the Hospital at Durham, North Carolina (phone 9011) and asking for the Center, physicians can readily and at all hours obtain information concerning the toxic ingredients in various mixtures as well as the latest forms of therapy. In addition, the Center will receive patients for emergency treatment at any time.

American Congress of Physical Medicine and Rehabilitation.

The 33rd annual scientific and clinical session of the American Congress of Physical Medicine and Rehabilitation will be held August 28th through September 2nd at the Hotel Statler, Detroit. All sessions will be open to members of the medical profession in good standing in the American Medical Association.

Full information may be obtained by writing to the executive secretary, Dorothea C. Augustin, 30 North Michigan Avenue, Chicago 2, Illinois.

Wanted.

A Physician for contract practice in coal camp. Write #80, care Virginia Medical Monthly, Box 5085, Richmond 20, Va. (1d/c)

Obituaries . . . .

Dr. Isaac Alexander Bigger, Jr.,

Chief of Surgery at the Medical College of Virginia for the past twenty-five years, died January 27th, after an illness of about a year. He was a native of South Carolina and sixty-one years of age. Dr. Bigger received his medical degree from the University of Virginia in 1919, following which he was an instructor and assistant professor of surgery there until 1927. He was associate professor of surgery at Vanderbilt University from 1927 to 1930, when he became full professor of surgery and surgeon-in-chief at the Medical College of Virginia. In this capacity, Dr. Bigger also served as chairman of the department of general surgery at the College and as Surgeon to the Crippled Childrens' Hospital.

Dr. Bigger served as president of the Richmond

Academy of Medicine in 1946 and was president of the Virginia Division of the American Cancer Society in 1947. He took an active part in the affairs of the American Association for Thoracic Surgery, serving as its treasurer, vice-president and president. He was a founding member of the American Board of Surgery. Dr. Bigger was a member of many other national, state and local medical organizations, having been a member of The Medical Society of Virginia for thirty-two years.

Dr. Bigger was a member of the editorial committee for the Thoracic Surgery Manual, associate editor of the American Practitioner, and a co-author with the late Dr. J. Shelton Horsley of a two-volume work "Operative Surgery".

An editorial in the Richmond paper stated "Dr. Isaac Alexander Bigger was that rarity among men, a man who is genuinely great, and genuinely good. . . . There was an intern who commented that 'a patient was never a "case" to Dr. Bigger—a patient was a human being whom he wanted to help get well.' . . . At the Medical College of Virginia Hospital, he counted for much more than 'chief of surgical services.' He was the hub around which the hospital revolved, yet he never sought glory or pulled rank."

Dr. Bigger is survived by his wife and three daughters.

Dr. Henry Page Mauck,

Prominent orthopedic surgeon of Richmond, died January 22nd at the home of a friend where he was having dinner. He was sixty-three years of age and a graduate of the Medical College of Virginia in 1915. After service during World War I, Dr. Mauck began the practice of orthopedics in Richmond. He was a member of the board of directors of Johnston-Willis Hospital, treasurer of the American Orthopedic Association, and a member of the Robert Jones Society of Orthopedic Surgeons. He was chief of the Department of Orthopedics at Johnston-Willis and Crippled Childrens' Hospital and was chairman of the Department of Orthopedic Surgery at the Medical College of Virginia. Dr. Mauck was also a member of the State Board of Health, having been appointed by Governor Battle in 1954.

Dr. Mauck was a member of many other national, state and local medical organizations. He had been a member of The Medical Society of Virginia for thirty-six years.

His wife and three sons survive him.

Dr. Percy Harris,

Former Mayor of Scottsville and well-known physician, died February 4th following a heart attack. He was seventy-three years of age and a graduate of the Medical College of Virginia in 1905. Dr. Harris was prominent in civic affairs of his community, having served as Mayor for twenty years, resigning this position about four years ago. He was a Mason and a member of the Lions Club. Dr. Harris had been an active member of The Medical Society of Virginia for fifty years. He had served on committees and had been a member of the Council for several terms.

His wife and four children survive him.

Dr. Rooker John White,

Prominent physician of Keller, died January 5th after a short illness following coronary thrombosis. He was seventy-five years of age and a graduate of the Medical College of Virginia in 1901. Dr. White opened his office at Keller in 1903. In spite of a large practice, he found time for many civic and business activities, having served on the Accomack County Board of Health, a member and chairman of the Accomack School Board. He was director of a bank and president of a fire insurance company. Dr. White had been a member of The Medical Society of Virginia for fifty years and was made a Life Member in 1951.

His wife and two children survive him.

Dr. George August Leonard Kolmer.

This office has just learned of the death of Dr. Kolmer, Salem, which occurred on November 21st. He was seventy-three years of age and had been a member of The Medical Society of Virginia for forty-one years.

The following resolution was adopted by the Roanoke Academy of Medicine.

> The Roanoke Academy of Medicine learned with profound regret of the death of our fellow physician and friend, Dr. George Kolmer. The citizens of the Town of Salem, Roanoke County, and the entire community have lost a good friend, and a most able physician.
>
> Dr. Kolmer graduated from Johns Hopkins in 1913 following which he served one year with the Virginia Public Health Service. He established his practice in Salem in 1914, where he had been located and actively practicing since. He served in both World War I and World War II, and held the rank of Lieutenant Colonel. He was a charter member of American Legion Post 19. He was an active member of the College Lutheran Church, trustee of Roanoke College, and vice-president of the Farmer's National Bank.
>
> Dr. Kolmer served for over twenty years as Health Officer of the Town of Salem, and was also Medical Examiner for Roanoke County.
>
> He was married to Miss Emma Cook in 1931, and is survived by her, two sons, George Jr., and J. Wilson, and one daughter, Mary Cook, as well as his brother, Dr. John A. Kolmer of Temple University.

Dr. Kobner will be sincerely missed by his large host of patients and friends in his community.

Be It Resolved that a copy of this resolution to spread upon the minutes of the Roanoke Academy of Medicine, a copy sent to the Virginia Medical Monthly, and a copy to his family.

Russell B. Smiley, M. D.
Fred S. Cruser, M. D.

Dr. William Richard Morton,

Well know physician of Richmond, died January 30th as a result of injuries suffered in an automobile accident on the 20th. He was a native of Oxford, North Carolina, and fifty-one years of age. He graduated from the Medical College of Virginia in 1926. Dr. Morton had practiced in Richmond since that time and was a member of the medical staff of Grace Hospital. He was active in civic affairs, having served with the Richmond Chamber of Commerce, Richmond Better Business Bureau, and the Barton Heights Citizens Association. Dr. Morton was a former member of the Board of Trustees of the Richmond Academy of Medicine, a past president of the Richmond Academy of General Practice, and had been a member of The Medical Society of Virginia since 1927.

His wife and two children survive him.

Dr. Albert Patton Whited,

One of the oldest practicing physicians in Southwestern Virginia, died January 23rd. He was eighty-two years of age and made his home at Honaker, where he had practiced for the past fifty years. Dr. Whited was a graduate of the Medical College of Virginia in 1903. He had been a member of The Medical Society of Virginia for fifty years and was made a Life Member in 1953.

His wife and several children survive him.

Dr. Bates.

Dr. Robley D. Bates, Sr., departed this life, at his home at Newtown on October 23, 1954, in the 79th year of his age. He was a graduate of the Medical College of Virginia in 1906. He had practiced his profession in the community in which he was born and reared all of his life, beloved and respected by a host of neighbors and friends who attested their love and devotion by their attendance at his funeral at Bowling Green in large numbers.

Dr. Bates was a charter member of the Mid-Tidewater Medical Society, a past president, and always a loyal and active member, and lent to its deliberation his wisdom and good counsels. He served the First District as Councilor of The Medical Society of Virginia, and was President of The Medical Society of Virginia. For many years he was a member of the State Board of Medical Examiners.

Dr. Bates was the personification of the good physician, who kept abreast of advancements, taking the worthwhile and pushing aside the useless, learned in understanding human nature, gentle and kind. He was devoted to medicine and contributed to organized medicine in many ways. To us who knew him he stood four square, a loyal colleague who upheld the honor and dignity of the profession by every action and deed.

Therefore Be It Resolved, that the Mid-Tidewater Medical Society forward to the family of Dr. Bates a copy of this resolution and a copy be entered in the minutes of the Society.

Thomas E. Smith, *President*
Malcolm H. Harris, *Secretary*

Dr. Fay.

Dr. Frederick Oliver Fay of Norfolk was born in Union Springs, Alabama in 1904 and died very suddenly at his home on November 13, 1954.

After completing his studies in the public schools, Dr. Fay was graduated from King's College and four years later received his M.D. degree from the Medical College of Virginia. He spent the years from 1930 to 1934 receiving training in his chosen specialty of Otolaryngology and Ophthalmology. He entered practice in Wilmington, N. C., and after a few years there, he moved to Norfolk in 1940 to continue this specialty.

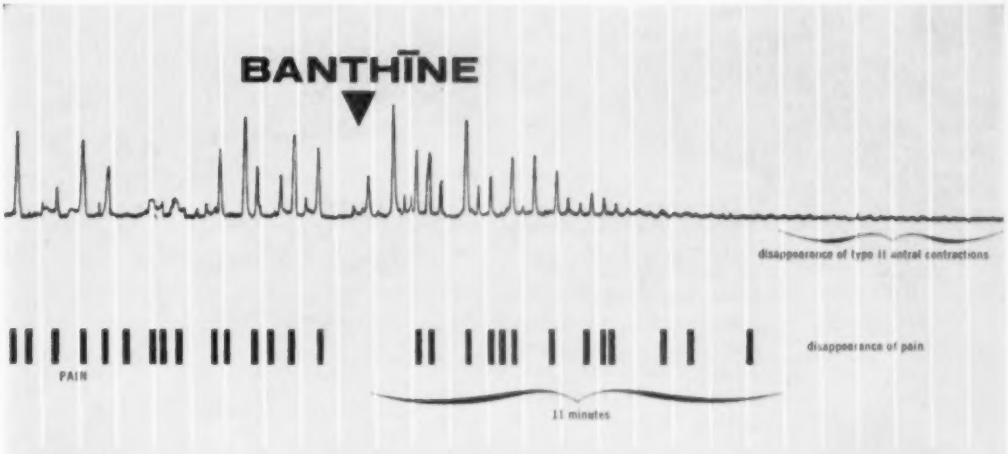
Early in World War II, Dr. Fay joined the Medical Department of the United States Navy as a Lieutenant-Commander, serving at the Norfolk Naval Operating Base and later in San Juan, Puerto Rico; he was separated from active service at the end of the war with the rank of Captain. He remained in the Active Reserves until his death and for four years prior to his death he had been senior Medical Officer of the St. Helena Naval Reserve Training Center.

Since resuming private practice in 1946, Dr. Fay had many demands on his time and energy. In addition to conducting a very active private practice and his duties in the Naval Reserve, Dr. Fay had given generously of his time and ability in the free work of the clinics of two hospitals here and was for eight years Consultant in Ophthalmology to the Norfolk City Venereal Disease Clinic. He was also active in civic and church affairs and belonged to many civic and fraternal organizations; he was an active member of the Knox Presbyterian Church and Men's Bible Class. Although the last years of his life were attended by a serious heart condition, the welfare of his patients was Dr. Fay's first concern. His was a retiring nature and he was a truly sweet and unselfish man. The love his patients felt for him attests to this, full well.

Dr. Fay was held in high esteem by all who knew him. The Norfolk County Medical Society and the community have suffered a great loss in the passing of this fine physician, Christian gentleman, and beloved member. He is survived by two sons, Fred O. Fay, Jr., and James Edward Fay, and one brother and one sister who reside in Alabama.

We ask that our sympathy be extended to the surviving members of his family and that a copy of these resolutions be sent to them, spread on the minutes of this Society, and a copy forwarded to the Virginia Medical Monthly.

A. D. Morgan, M.D.
A. A. Burke, M.D.
W. Wickham Taylor, M.D.



Effect of 100 mg. of Banthine administered orally on antral gastric motility and duodenal ulcer pain.

Hightower, N. C., Jr., and Gambill, E. E.: Gastroenterology 23:244 (Feb.) 1953.

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Raffin, J. M., Tester, E. C., Jr., Carter, D. D., and Baylin, G. J.: J.A.M.A. 153:1159 (Nov. 28) 1953.

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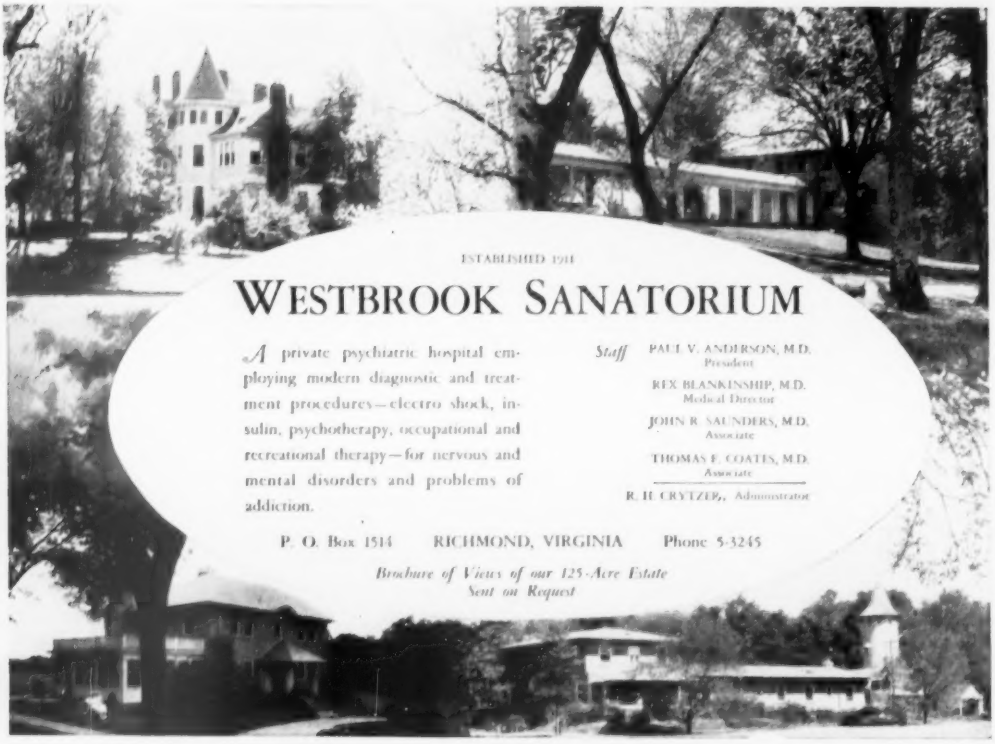

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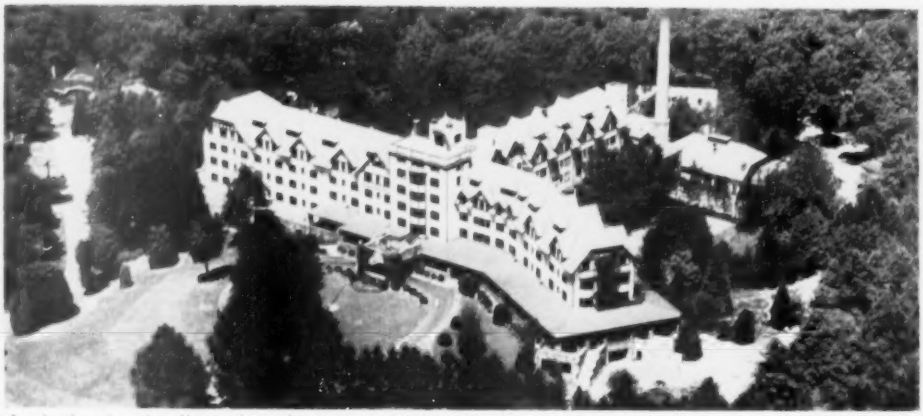

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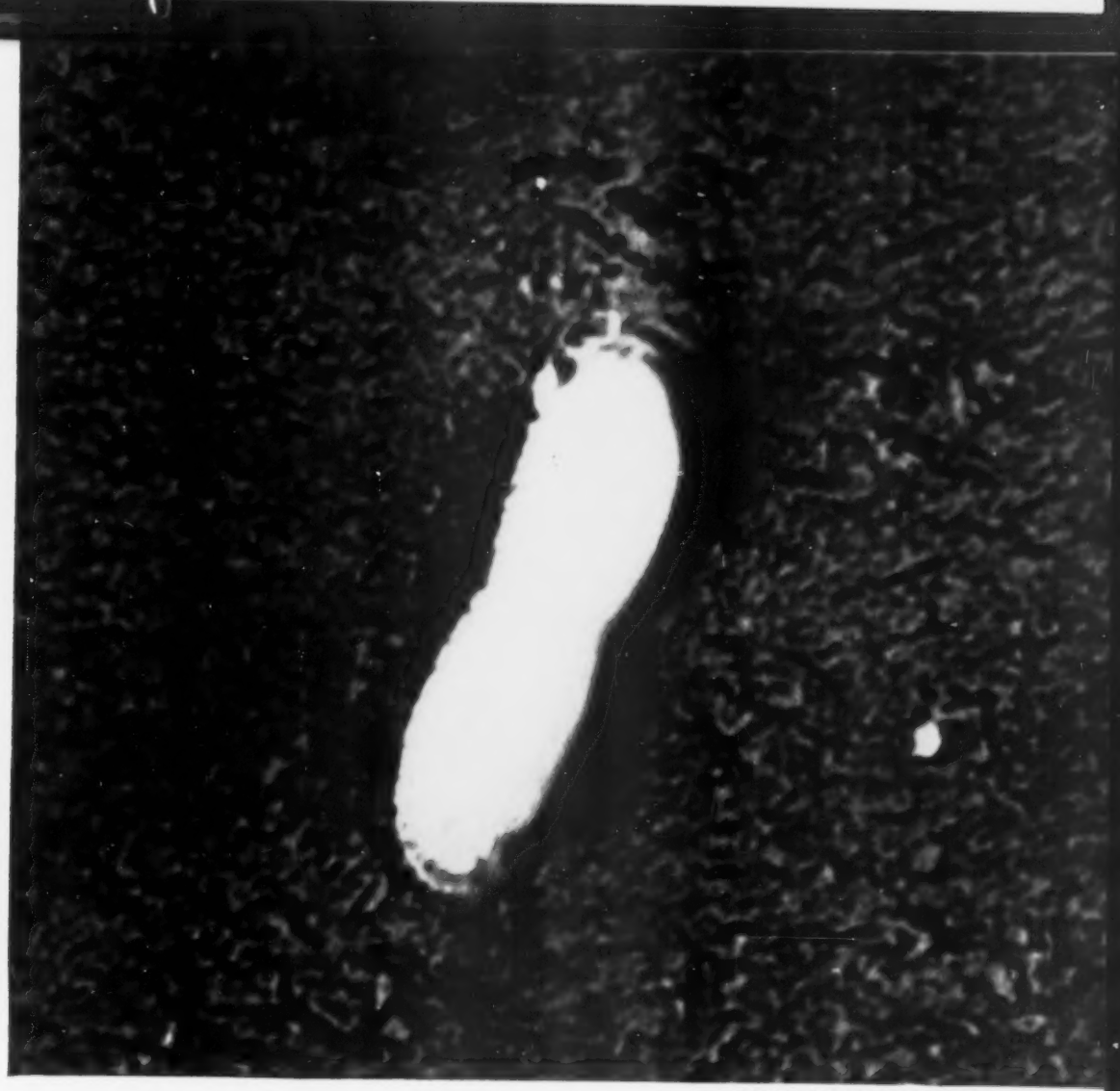

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Physiologically acceptable Neo-Synephrine hydrochloride solution promptly constricts the engorged nasal capillaries which are responsible for nasal congestion in the common cold. When the nasal mucosa is reduced to its normal state, the nasal passages resume their proper patency, drainage is possible, and the patient can again breathe freely.
By its shrinking action on the nasal mucosa, Neo-Synephrine helps to keep the sinuses aerated and the openings to the eustachian tubes clear.
Neo-Synephrine within minutes produces decongestion that lasts for hours.
NEO-SYNEPHRINE®
Hydrochloride
0.25%, 0.5% and 1% Solution
New: Nasal Spray — Plastic Squeeze Bottle
Winthrop-Stearns INC. NEW YORK 18, N.Y. WINDSOR, ONT.
Neo-Synephrine
(brand of phenylephrine),
trademark reg. U.S. Pat. Off.

ELECTRON PHOTOMICROGRAPH

Streptococcus pyogenes 36,000 X

Streptococcus pyogenes is a Gram positive organism commonly involved in a great variety of pathologic conditions, including scarlet fever • tonsillitis • pharyngitis • otitis media • sinusitis bronchopulmonary disease • pyoderma • empyema • septicemia • meningitis mastoiditis • vaginitis • rheumatic fever • acute glomerulonephritis

It is another of the more than 30 organisms susceptible to

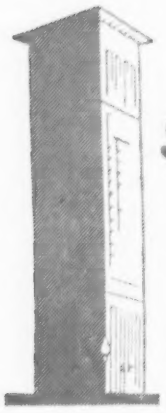
PANMYCIN* HCl

TETRACYCLINE HYDROCHLORIDE

100 mg. and 250 mg. capsules

*TRADEMARK, REG. U.S. PAT. OFF.

Upjohn



In Virginia

FIRST AND MERCHANTS
NATIONAL BANK OF RICHMOND
MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

The American Way

is peace, prosperity, and goodwill toward our fellow man—to invest our time in educating and learning; and our money in good citizens and fine institutions.

One of the finest institutions of your State is Richmond Hotels Incorporated, one that maintains the highest modern hotel standards . . . one that combines the hospitality and charm of the old and the convenience and comfort of the new.

John Marshall William Byrd
King Carter Richmond

Richmond Hotels Incorporated

Patients on "Premarin" therapy experience prompt relief of menopausal symptoms and a highly gratifying "sense of well-being."

"Premarin"®—Conjugated Estrogens (equine)

5512

Meat...

and the Therapeutic Protein Dietary

For many years clinicians and surgeons have recognized the therapeutic value of the high protein dietary.

In more than normal amounts, protein is essential in the treatment of many diseases characterized by hypoproteinemia[1]—nephrosis,[2] sprue, pellagra, chronic colitis, certain liver afflictions,[3] anorexia of diverse etiologies. High protein intake helps to stabilize tissue protein in diseases in which protein catabolism is increased, such as hyperthyroidism and protracted high fever. Dietaries high in protein promote wound healing in the surgical patient and speed convalescence.[4] Sufficient protein ingestion constitutes a protective measure in the geriatric patient.[5] Large amounts of protein are required to satisfy the growth and other metabolic needs of the pediatric patient.

Meat provides large quantities of protein highly effective in the body economy—tissue growth and maintenance, formation of antibodies, enzymes, and protein hormones, and regulation of fluid balance. It also supplies valuable amounts of B vitamins and essential minerals including iron, phosphorus, and potassium. Appeal to the palate, easy digestibility, and its nutrient contribution make meat an important component of therapeutic diets.

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1. Taggart, H. A.: Protein Metabolism in Relation to Nutritional Aspects of Medical Diseases, Pennsylvania M.J. *54*:339 (1951).
2. Marquardt, G. H.; Cummins, G. M., and Fisher, C. L.: Blood Protein Replenishment in Treatment of Nephritic Edema, Quart. Bull. Northwestern Univ. M. School *26*:140 (1952).
3. Kark, R. M.: Low Sodium and High Protein Diets in Laennec's Cirrhosis, M. Clin. North America *35*:73 (1951).
4. Kekwick, A.: Protein Deficiency in Surgical Patients, Ann. Roy. Coll. Surgeons England *7*:390 (1950).
5. Stieglitz, E. J.: Nutrition Problems of Geriatric Medicine, Report of Council on Foods and Nutrition, J.A.M.A. *142*:1070 (Apr. 8) 1950.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

American Meat Institute

Main Office, Chicago...Members Throughout the United States

"¡Valiente!" cried the Spanish admiral

He cheered as his launch fished this man and seven more water-logged American sailors out of Santiago Harbor, Cuba, on the morning of June 4, 1898. This was straining Spanish chivalry to the breaking point, for Richmond Hobson (right) and his little suicide crew had spent the previous night taking a ship into the harbor entrance under a hail of cannonade and deliberately sinking her to bottle up the Spanish fleet.

Hobson was actually an engineer, not a line officer. In Santiago Harbor, he led his first and only action against the enemy. But his cool-headed daring made him as much a hero of the day as Admiral Dewey. And proved again that America's most valuable product is Americans.

These Americans—proudly confident of their nation's future—are the people who stand behind United States Series E Savings Bonds. They are the people who, by their spirit and abilities, make these Bonds one of the world's finest investments.

That's why there's no better way to protect *your* future than by investing in *America's* future! Buy Bonds regularly!

★ ★ ★

It's actually easy to save money—when you buy United States Series E Savings Bonds through the automatic Payroll Savings Plan where you work! You just sign an application at your pay office; after that your saving is done for you. And the Bonds you receive will pay you interest at the rate of 3% per year, compounded semiannually, for as long as 19 years and 8 months if you wish! Sign up today! Or, if you're self-employed, invest in Bonds regularly where you bank. There's no surer place to put your money, for United States Savings Bonds are as safe as America!

For your own security—and your country's, too—

invest in U. S. Savings Bonds!

The U. S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.

Thank you doctor for telling mother about...

The Best Tasting Aspirin you can prescribe

The Flavor Remains Stable down to the last tablet

15¢ Bottle of 24 tablets (2½ grs. each)

We will be pleased to send samples on request

THE BAYER COMPANY DIVISION of Sterling Drug Inc., 1450 Broadway, New York 18, N. Y.

The Place of Enriched Bread in the Reducing Diet

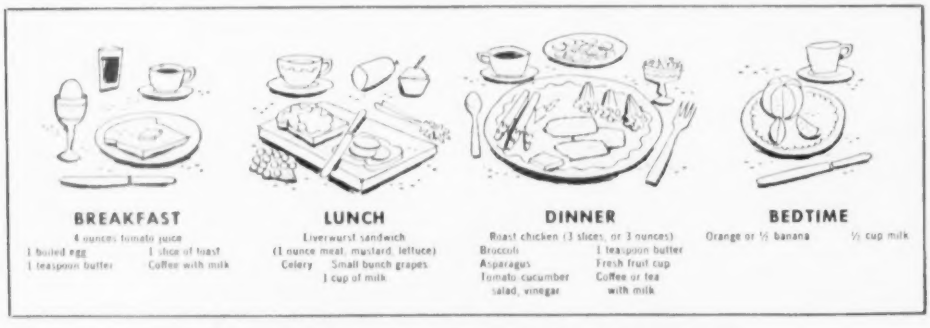
It is universally acknowledged that the only effective means of weight reduction is restriction of caloric intake. Furthermore, it is acknowledged that no single food can be branded as fattening, that the solution to the problem is sensible limitation of the amounts of all foods eaten.

That enriched bread has a place in the modern reducing diet is evidenced by its inclusion in many weight reduction programs recommended by authorities in the fields of metabolism and internal medicine. Such a diet has recently been included in a pamphlet published by one of the nationwide organizations concerned with national health and the increasing problem of obesity.

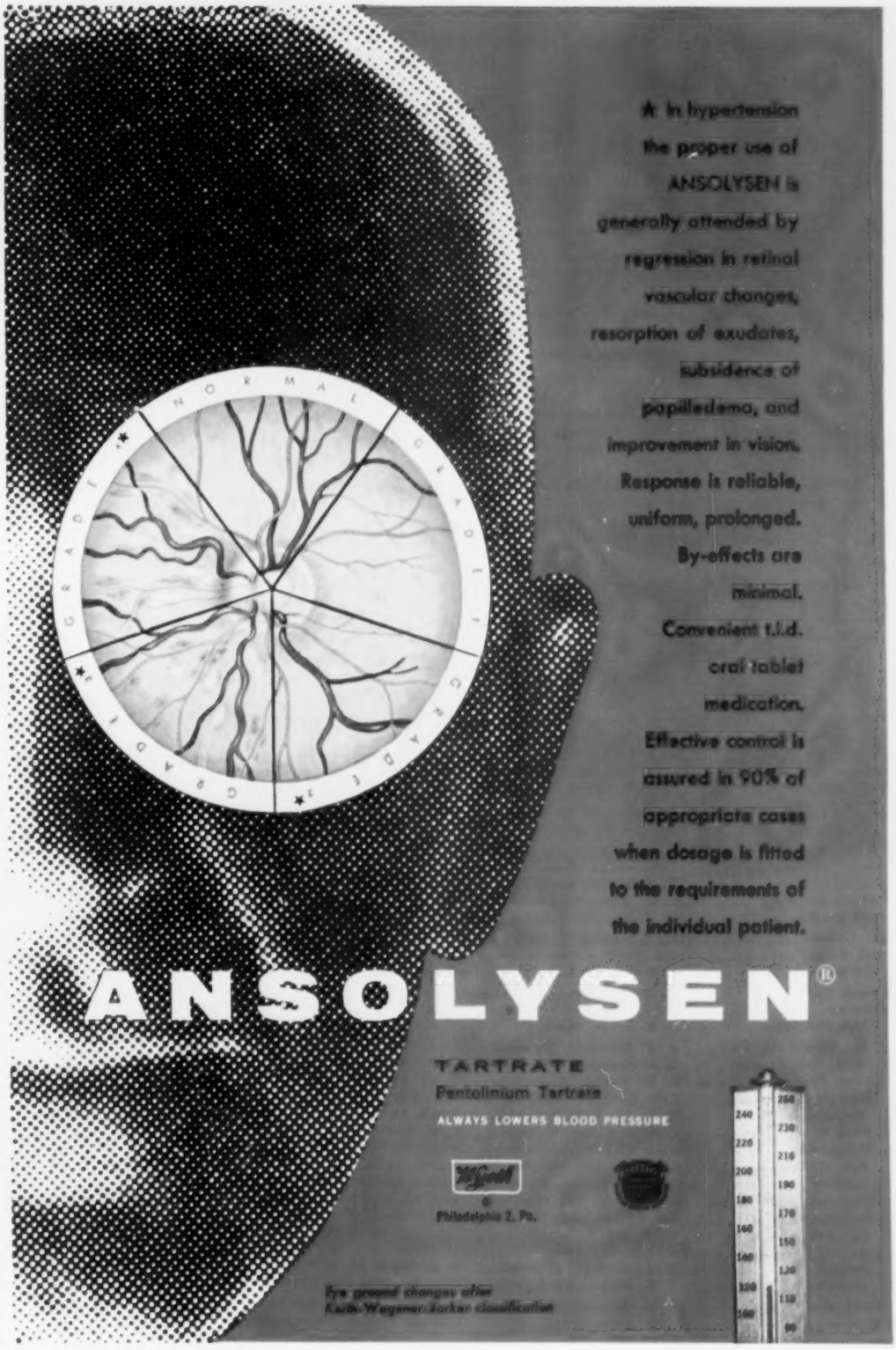
This diet, a conventional reducing diet providing 1,200 to 1,400 calories per day, allows a balanced variety of basic foods including bread. Note the sample menu.

Enriched bread is far more than just a carbohydrate food, as is often the mistaken concept. Moreover, in itself, it is not a "fattening food," since only the calorically excessive diet can induce increase in body weight. Three slices of enriched bread provide only 189 calories, yet this amount makes a worthwhile contribution of biologically applicable protein, B group vitamins, and valuable minerals including iron and calcium. Of even greater importance to the person dieting is the gustatory attractiveness which bread lends to the meal.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.



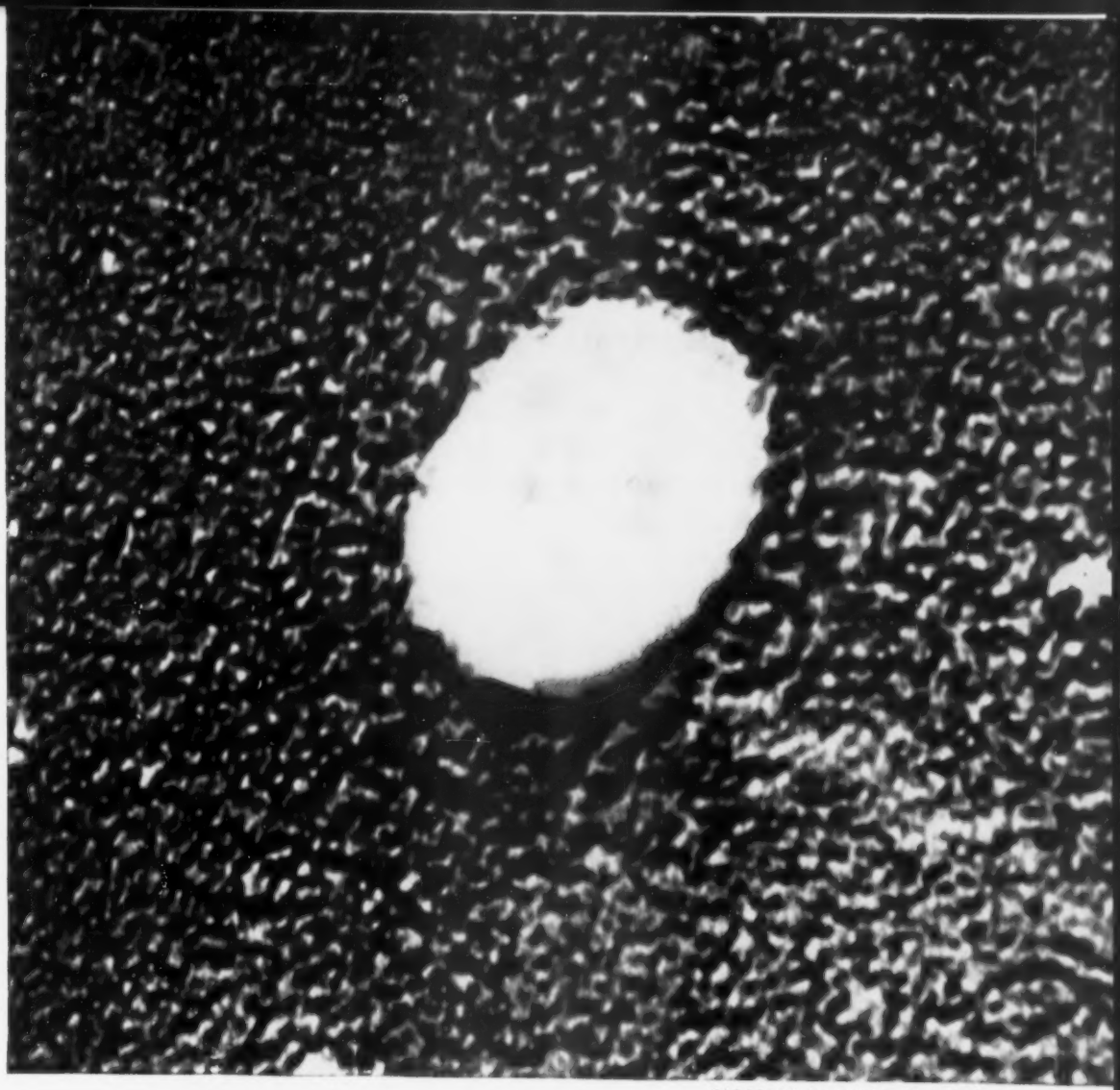
THE VIRGINIA BAKERS COUNCIL
In co-operation with
THE AMERICAN BAKERS ASSOCIATION


NORMAL
GRADE I
GRADE II
GRADE III
GRADE IV
★ In hypertension the proper use of ANSOLYSEN is generally attended by regression in retinal vascular changes, resorption of exudates, subsidence of papilledema, and improvement in vision. Response is reliable, uniform, prolonged. By-effects are minimal. Convenient t.i.d. oral tablet medication. Effective control is assured in 90% of appropriate cases when dosage is fitted to the requirements of the individual patient.
ANSOLYSEN®
TARTRATE
Pentolinium Tartrate
ALWAYS LOWERS BLOOD PRESSURE
Philadelphia 2, Pa.
Eye ground changes after Keith-Wagener-Barker classification

Component and Other Medical Societies in Virginia

(Officers and Others are Requested to Notify the **Monthly** of Changes)

SOCIETY	PRESIDENT	SECRETARY	TIME OF MEETING
Accomac County	William C. Fritz Onancock	J. C. Doughty, Onancock	Quarterly
Albemarle County	E. C. Drash, Charlottesville	Cary Moon, Charlottesville	Monthly
Alexandria	C. J. Murphy, Jr., Alexandria	T. F. McGough, Alexandria	Monthly
Alleghany-Bath Counties	S. G. Miller, Covington	T. P. Hawkins, Jr., Clifton Forge	Bi-Monthly
Amherst-Nelson Counties	Lyddane Miller, Amherst		
Arlington County	H. C. Bates, Jr., Arlington	S. J. Sheehy, Arlington	Monthly
Augusta County	William Lueders, Jr., Staunton	J. T. Obenschain, Waynesboro	Quarterly
Bedford County	W. G. Hardy, Bedford	Dennis Robinson, Bedford	Quarterly
Botetourt County	M. S. Stinnett, Buchanan	E. L. Coffey, Buchanan	
Buchanan-Dickenson Counties	J. P. Williams, Richlands	J. S. Richardson, Grundy	Monthly
Charlotte County	Stuart Wilson Tuggle, Keysville	Thos. Watkins, Drakes Branch	
Culpeper County	O. K. Burnette, Culpeper	Cecil G. Finney, Culpeper	
Danville-Pittsylvania County	J. W. Hooker, Danville	J. D. Beale, Danville	Monthly
Fairfax County	Robert Hunt, Falls Church	William Harris, Falls Church	Quarterly
Fauquier County	Frank Folk, Warrenton	Evan Ashby, Jr., Remington	Monthly
Floyd County	J. C. Rutrough, Willis	F. C. Bedsaul, Floyd	
Fourth District	W. B. McIlwaine, Petersburg	J. G. Graziani, Farmville	Five times a year
Fredericksburg	Joseph MacKnight, Fredericksburg	H. L. Earnhardt, Fredericksburg	Monthly
Halifax County	W. J. Hagood, Clover	G. E. Chappell, Halifax	
Hanover County	J. D. Hamner, Jr., Ashland	Claude K. Kelly, Mechanicsville	
Hampton	Paul J. Parker, Hampton	R. H. Wright, Jr., Phoebus	Semi-Monthly
Hopewell	C. H. Dougherty, Hopewell	W. P. Youngblood, Hopewell	
James River	Williams S. Lloyd, Goochland	J. H. Yeatman, Fork Union	Quarterly
Lee County	C. C. Carr, Pennington Gap	H. A. Kinser, Pennington Gap	
Loudoun County		Samuel Morrison, Leesburg	Monthly
Louisa County	E. B. Pendleton, Cuckoo		
Lynchburg Acad. Med.	J. R. Saunders, Lynchburg	Frank N. Buck, Lynchburg	Monthly
Med. Soc. of Va.	Carrington Williams, Richmond	R. I. Howard, Richmond	October 16-19, Richmond
Mid-Tidewater	Thomas E. Smith, Hayes	M. H. Harris, West Point	Quarterly
Montgomery County	R. H. Grubbs, Christiansburg	D. D. Chiles, Radford	
Norfolk County	C. J. Devine, Norfolk	Donald T. Faulkner, Norfolk	Semi-Monthly
Northampton County	J. R. Hamilton, Nassawadox	Thos. Hardman, Cape Charles	Quarterly
Northern Neck	N. R. Tingle, Nuttsville	J. M. Dailey, Reedville	Semi-Annually
Northern Virginia	E. L. Hopewell, Strasburg	Dennis McCarty, Front Royal	Three times a year
Orange County	David H. Miller, Orange	J. G. Bruce, Jr., Gordonsville	
Patrick-Henry County	F. T. Renick, Martinsville	T. H. Dickerson, Martinsville	Quarterly
Princess Anne County	Ralph Stata, Oceana	James W. Todd, Virginia Beach	
Richmond Acad. Med.	R. D. Butterworth, Richmond	Patty Boatwright, Richmond	Semi-Monthly
Roanoke Academy	Allen Barker, Roanoke	Horace Albertson, Roanoke	Monthly
Rockbridge County	T. B. Hedrick, Buena Vista	E. W. Bosworth, II, Lexington	Monthly
Rockingham County	P. W. Nash, Timberville	W. J. Hotchkiss, Broadway	Quarterly
Russell County	R. F. Gillespie, Lebanon	W. A. Davis, Dante	
Scott County	W. L. Griggs, Jr., Gate City		
Smyth County	Jos. J. Eller, Marion	Jas. A. Soyars, Saltville	
Southwestern Virginia	C. C. Hatfield, Saltville	R. Jones, Roanoke	Semi-annually
Tazewell County	W. T. Henderson, Richlands	Mary E. Johnston, Tazewell	Quarterly
Tri-County	W. H. Chapman, Jr., Suffolk	L. J. Stetson, Suffolk	Monthly
Tri-State Med. Assn.	F. E. Kredel, Charleston, S.C.	R. B. Davis, Greensboro, N. C.	February 21-22, 1955
Va. Soc. Amer. Col. Phys.	A. F. Robertson, Staunton	J. F. Waddill, Norfolk	October 1955
Va. Acad. Gen. Practice	R. M. Reynolds, Norfolk	C. W. Meador, Richmond	May 13-15, 1955
Va. Chest Physicians	C. W. Meador, Richmond		May 13-15, 1955
Va. Diabetes Assn.	T. S. Edwards, Charlottesville	J. F. Conner, Kecoughtan	October 1955
Va. Neuropsychiatric	G. L. Jones, Williamsburg	Frank Strickler, Roanoke	Quarterly
Va. Obst. & Gynec. Soc.	E. S. Grosecloose, Roanoke	C. D. Bradley, Newport News	October 1955
Va. Orthopedic Soc.	Allen M. Ferry, Arlington	Wm. Deyerle, Richmond	October 1955
Va. Soc. of Pathology	Edward Levy, Norfolk	Geo. J. Carroll, Suffolk	October 1955
Va. Pediatric Soc.	E. L. Kendig, Jr., Richmond	William Spencer, Richmond	
Va. Peninsula Acad.	O. W. Ward, Sr., Hampton	Wm. Watkins, Newport News	Monthly
Va. Radiological Soc.	Geo. Cooper, Charlottesville	P. B. Parsen, Norfolk	
Va. Soc. Anesthesiologists	W. E. Pembleton, Richmond	John Rosenthal, Norfolk	
Va. Soc. O. L. & O.			May 6-7, 1955
Va. Surgical Soc.	Randolph Hoge, Richmond	R. I. Payne, Jr., Norfolk	October 1955
Va. Urological Soc.	T. B. Washington, Richmond	Wm. R. Jones, Jr., Richmond	
Warwick-Newport News	T. W. Tankard, Warwick	F. S. Beazley, Jr., Newport News	Monthly
Williamsburg-Jas. City	E. B. Kilby, Toano	Linwood Farley, Williamsburg	2nd Wed. except June, July & Aug.
Wise County	T. J. Tudor, Norton	L. N. Kirch, Norton	Bi-Monthly



ELECTRON PHOTOMICROGRAPH

Shigella dysenteriae 42,000 X

Shigella dysenteriae (Shiga's bacillus) is a Gram-negative organism which causes bacillary dysentery.

It is another of the more than 30 organisms susceptible to

PANMYCIN®

HCl

100 mg. and 250 mg. capsules

®TRADEMARK

Upjohn

Planning the Low-Purine Diet for a long run...

Imagination is essential to this diet since your patient may have to follow it for many years. These diet "do's" can show him how to use eggs, cheese, and milk—a trio of almost purine-free foods—to supply the major portion of his protein.

In these, the trio plays a solo—

Eggs baked in pimiento-flecked cheese sauce are hard to resist. Or, if your patient prefers, the sauce can be poured over hard-cooked eggs.

A casserole of eggplant and tomatoes layered alternately with ricotta or cottage cheese makes a satisfying entree. Add a sprinkle of grated parmesan with a fine Italian hand.

Your patient may like his eggs poached in tomato juice. Then serve them in a soup bowl with a frill of chopped parsley on top.

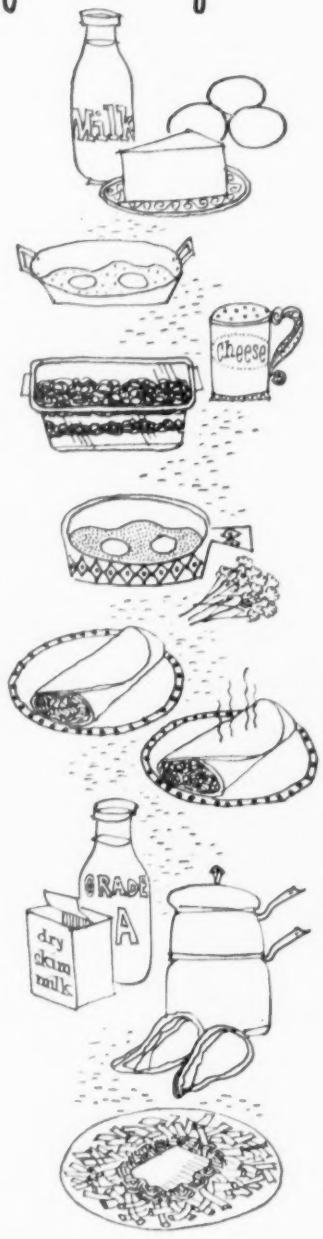
In these, the trio plays accompaniment—

Ham 'n' egg rolls come hot or cold. For hot, roll a warm slice of ham around eggs that have been scrambled with a pinch of savory. For cold, roll ham around egg salad mixed with cottage cheese.

Oyster stew can be creamy without cream when the milk is bolstered with dry skim milk powder. A pinch of thyme and some chopped parsley add savor.

Broiled salmon or tuna-burgers nestle nicely in a nest of noodles. A slice of cheese on top adds color and broils to a bubbling brown.

These suggestions are only a few of the possible combinations of this versatile trio. And the adequate protein nutrition they make possible, plus a liberal intake of fluids, may help establish a regimen that will please you both.



United States Brewers Foundation

Beer—America's Beverage of Moderation

104 calories, 17 mg. sodium/8 oz. glass (Average of American beers)

If you'd like reprints for your patients, please write United States Brewers Foundation, 535 Fifth Avenue, New York 17, N. Y.

"an effective antirheumatic agent"*

nonhormonal anti-arthritic

BUTAZOLIDIN®

(brand of phenylbutazone)

relieves pain • improves function • resolves inflammation

The standing of BUTAZOLIDIN among today's anti-arthritics is attested by more than 250 published reports. From this combined experience it is evident that BUTAZOLIDIN has achieved recognition as a potent agent capable of producing clinical results that compare favorably with those of the hormones.

Indications: Gouty Arthritis Rheumatoid Arthritis Psoriatic Arthritis
Rheumatoid Spondylitis Painful Shoulder Syndrome

BUTAZOLIDIN® (brand of phenylbutazone) red coated tablets of 100 mg.

*Bunim, J. J.: Research Activities in Rheumatic Diseases, Pub. Health Rep. 69:437, 1954.

GEIGY PHARMACEUTICALS

Division of Geigy Chemical Corporation, 220 Church Street, New York 13, N.Y.

because safety and nutritional effectiveness count so very much

specify DEXTRI-MALTOSE

MANUFACTURED SPECIFICALLY FOR INFANT FORMULAS

Dextri-Maltose is specifically designed for infant formulas—*and only infant formulas.* Unlike many milk modifiers, Dextri-Maltose is palatable but not sweet. It does not cloy the appetite. Infants fed Dextri-Maltose formulas do not develop a "sweet tooth" which may cause later resistance to essential foods.

The dextrins and maltose in Dextri-Maltose, plus the lactose of milk, give the infant a mixture of *three* different carbohydrates. These are broken down at different rates in the intestinal tract. Absorption is gradual. Sudden fluctuations in blood sugar levels are prevented.

Dextri-Maltose® is always kept safe and dependable through meticulous quality control. No other carbohydrate used in infant feeding has such a background of acceptance and dependability.

the importance of adequate added carbohydrate

Added carbohydrate provides calories needed to spare protein for tissue building, to permit proper fat metabolism and promote good water balance. Authorities on infant feeding recommend the addition of about 5% carbohydrate to milk and water mixtures. This proportion of carbohydrate is obtained by adding 1 tablespoon of Dextri-Maltose to each 5 or 6 ounces of fluid.

MEAD JOHNSON & COMPANY
EVANSVILLE, INDIANA, U.S.A.

MEAD